# United States Air Force Scientific Advisory Board Biography Book


**2017-2018**
**1060 AF Pentagon (Rm 5E815)**
**Washington, DC 20330-1060**

**Telephone**
**Pentagon: (703) 695-4297**
**Andrews AFB: (240) 612-5513**

**http://www.scientificadvisoryboard.af.mil/**

# Mission of the Board

The Air Force Scientific Advisory Board (SAB) was established by General "Hap" Arnold to assist the Air Force in maintaining its "vision into the future" of technology-enabled capabilities. Since 1944, the SAB has served as the Air Force's principle external advisory body for science and technical matters relating to its mission - to fly, fight and win in Air, Space and Cyberspace. The Board provides a link between the Air Force and the nation's scientific community and provides independent scientific and technical advice to Air Force leadership.

The SAB accomplishes its mission by conducting studies on topics deemed critical by the Secretary and Chief of Staff of the Air Force, by conducting reviews of the Science and Technology portfolio in the Air Force Research Laboratory, and by providing independent technical reviews where needed by SecAF, CSAF, Major Commands, and the Air Force Research Laboratory. The SAB's mission supports the Air Force in achieving its central strategy of adapting and responding faster than potential adversaries.

SAB members are among the nation's top civilian scientists and engineers from industry, national labs, federal funded research and development centers, academia, and retired general officers. Members are selected to obtain the best, independent advice possible and on the basis of preeminence in scientific fields of interest and importance to the Air Force. It is the broad technical expertise, experience, leadership, and vision of its members that are essential to the Board's ability to provide the type of advice that the Air Force relies on from the SAB.

The Board exists to complement, but not duplicate, the work of the Assistant Secretary of the Air Force for Acquisition, the Air Force Research Laboratory, and other Air Force activities that deal with science and technology issues. The Board is chartered by the Secretary of Defense and reports directly to the Secretary of the Air Force and to the Air Force Chief of Staff.

The SAB operates as a Federal Advisory Committee under the Federal Advisory Committee Act, therefore the Board's function is purely advisory. The Board presents its findings and recommendations to the Secretary and Chief of Staff of the Air Force, as well as other senior leaders. All decisions or actions taken on Board advice or recommendations are made solely by full-time, salaried officers or employees of the Air Force.

# Table of Contents

# Section 1: Member Biographies

**Dr. James S. Chow**
**RAND Corporation**
**Chair, USAF Scientific Advisory Board**

**EDUCATION**

Stanford University
- Ph.D., Mechanical Engineering (Fluid Mechanics),1994
- M.S., Aero/Astro, 1989

University of California at San Diego
- B.S., Mechanical Engineering, 1988

**WORK EXPERIENCE**

RAND Corporation
- Director, Force Modernization and Employment, Project AIR FORCE, 2018-present
- Senior Engineer, Engineering and Applied Sciences, 2003-2018
- Assistant to the President for Research on Counterterrorism, 2004-2011
- Program Director (Acting), Force Modernization and Employment, 2008
- Associate Program Director, Force Modernization and Employment, 2006-2010
- Manager, Technology and Applied Sciences, 2000-2003
- Engineer, Technology and Applied Sciences, 1997-2003

Institute for Defense Analyses
- Research Staff Member, Systems Evaluation Division, 1994-1997

NASA Ames Research Center
- Fellowship Researcher, Fluid Mechanics Laboratory, 1990-1994

**AREAS OF EXPERTISE**

Defense systems analysis; management and leadership; future systems and force modernization; aircraft survivability; countering anti-access/area denial, military operations modeling and simulation.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Chief of Staff of the Air Force Award for Exceptional Public Service; Affiliated Faculty Member, Pardee RAND Graduate School; Member, AIAA; Member, Association of Old Crows.

**Dr. Melissa G. Choi**
**MIT Lincoln Laboratory**
**Vice Chair, USAF Scientific Advisory Board**

**EDUCATION**

North Carolina State University
Ph.D., Applied Mathematics, 1999
Ithaca College
B.A., Mathematics, 1994

**WORK EXPERIENCE**

MIT Lincoln Laboratory
Division Head, Homeland Protection and Air Traffic Control 2014-Present
Assistant Division Head, ISR and Tactical Systems, 2013-2014
Group Leader, Active Optical Systems, 2012-2013
Group Leader, Systems and Analysis, 2009-2012
Assistant Group Leader, Systems and Analysis, 2008-2009
Assistant Group Leader, Advanced System Concepts, 2006-2008
Technical Staff, Advanced System Concepts, 1999-2006

**AREAS OF EXPERTISE**

Systems analysis; modeling and simulation; intelligence, surveillance & reconnaissance (ISR); active optical systems (laser radar); EO/IR sensor systems; RF sensors; multi-INT architectures; PNT.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Society for Industrial and Applied Mathematics (SIAM), Phi Kappa Phi, Pi Mu Epsilon.

**Mrs. Natalie W. Crawford**
**RAND Corporation**
**EXCOM Member**

**EDUCATION**

Michigan State University
Engineering, Honorary Ph.D., 2016
University of California, Los Angeles
Graduate Study, Engineering & Applied Mathematics, 1966-1967
B.A., Mathematics, 1961

**WORK EXPERIENCE**

RAND Corporation
RAND Senior Fellow, 2006-Present
Project AIR FORCE Distinguished Chair in Air and Space Policy, 2014-Present
Vice President and Director Project AIR FORCE, 1997-2006
Associate Director, Project AIR FORCE, 1995-1997
Director, Force Modernization & Employment Program, Project AIR FORCE, 1993-1995
Director, Force Structure & Force Modernization Program, Project AIR FORCE, 1992-1993
Director, Theater Force Employment Program, Project AIR FORCE, 1988-1993
Associate Director, Theater Forces Program, Project AIR FORCE, 1986-1988
Senior Staff Member & Project Leader, Applied Sciences Department, 1974-1986
Member Technical Staff, Engineering Sciences & Astronautics Departments, 1964-1974
North American Aviation
Programmer Analyst, 1961-1964
Air Force Scientific Advisory Board
Co-Chairman, 1996-1999
Vice Chairman, 1990-1991
Member, 1988-2003; 2005-2014; 2015-Present

**AREAS OF EXPERTISE**

Conventional standoff weapons; night/adverse weather attack capabilities; tactical aircraft; aircraft survivability; munitions and targets; tactical air requirements; avionics; aero performance; aircraft survivability; electronic combat; weapons effects; off-board sensor support to combat operations; power projection force structure and assessments; theater air defense; force modernization; space systems; information operations; low observables; directed energy; space situational awareness.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Honorary Fellow AIAA (2017); Project AIR FORCE Distinguished Chair in Air & Space Policy (2014); United States Air Force Academy Thomas D. White National Defense Award (2012); Air Force Association Lifetime Achievement Award (2011); OSD Medal for Exceptional Public Service (2006); NDIA Combat Survivability Lifetime Achievement Award (2006); RAND Medal for Excellence (2006); Lifetime Achievement Award, Air Force Analytic Community (2003); Lt Gen Glenn Kent Leadership Award (2003); Decoration for Exceptional Civilian Service, USAF (2003, 1995); Vance R. Wanner Memorial Award, Military Operations Research Society (2003); Kelly Johnson Award, San Fernando Valley Engineers Council (1998); Woman of the Year, Santa Monica Chamber of Commerce Women's Business Council (1997); Santa Monica High School Hall of Fame (1995); YMCA Woman of the Year, (1983); Who's Who in the West; Member, JPL Advisory Council (2002 – 2009); Member, Sandia Nuclear Weapons External Advisory Board; Member, National Academy of Engineering (2001); Fellow, AIAA (2011).

**Gen Donald J. Hoffman, USAF (Ret)**
**Consultant**
**EXCOM Member**

**EDUCATION**
University of California, Berkeley
M.S., Electrical Engineering, 1975
US Air Force Academy
B.S., Electrical Engineering, 1974

**WORK EXPERIENCE**
Self-owned company
Consultant, 2012-Present
US Air Force
Commander, Air Force Material Command, 2008-2012
Military Deputy for Acquisition, HQ Air Force, Pentagon, 2005-2008
Director of Requirements, Air Combat Command, 2002-2005
Commander, 31st Fighter Wing, 2001-2002

**AREAS OF EXPERTISE**
Defense Weapon System Requirements, Research, Acquisition, Test, and Sustainment; Strategic Planning; Personnel Management and Training.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**
Air Force Association; American Solar Energy Society.

**Lt Gen George K. Muellner, USAF (Ret)**
**Independent Consultant**
**EXCOM Member**

**EDUCATION**

Defense Systems Management College
- Executive PM, 1991
- Air War College, 1983

Auburn University
- M.B.A., 1983

California State University
- M.S.E.E., 1979

University Of Southern California
- M.S.A.S.M., 1974

University of Illinois
- B.S.A.A.E., 1967

**WORK EXPERIENCE**

The Boeing Company
- President Advanced Systems, 2006-2008
- Sr. VP/GM Air Force Systems, 2002-2005
- President Phantom Works, 2000-2001
- VP/GM Phantom Works, 1999-2000

US Air Force
- SAF/AQ, 1995-1998
- PEO for JAST, 1993-1994
- SAF/AQP, 1993
- ACC/DR, 1991-1992

**AREAS OF EXPERTISE**

Defense acquisition, DT/OT&E, program management, weapon systems (aircraft & space), Air Force operations.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow, Society of Experimental Test Pilots; Fellow, Royal Aeronautical Society; Fellow and President, American Institute of Aeronautics and Astronautics; Board of Directors, Air Force Association; Member NAE/DEPS.

**Dr. Andrew G. Alleyne**
**University of Illinois, Urbana-Champaign**

**EDUCATION**

University of California, Berkeley
Ph.D., Mechanical Engineering, 1994
University of California, Berkeley
M.S., Mechanical Engineering, 1992
Princeton University
B.S.E., Aerospace Engineering, 1989

**WORK EXPERIENCE**

University of Illinois, Urbana-Champaign
Director, NSF POETS Engineering Research Center, 2015-Present
Associate Head for Undergraduate Programs in MechSE, 2014-2015
Associate Dean for Research, College of Engineering, 2008-2012
ETH Zurich
Visiting Professor, 2012
University of Colorado at Boulder
FIRST Faculty, 2010
University of Illinois, Urbana-Champaign
Ralph & Catherine Fisher Professor, College of Engineering, 2002-Present
Professor, Mechanical Science & Engineering, 2004-Present
Professor, Coordinated Science Laboratory, 2004-Present
Delft University of Technology
Prof of Vehicle Mechatronics, Faculty of Design, Engr & Production, 2003
University of Illinois, Urbana-Champaign
Associate Professor, Mechanical & Industrial Engineering, 2000-2004
Associate Professor, Coordinated Science Laboratory, 2000-2004
Assistant Professor, Mechanical & Industrial Engineering, 1994-2000

**AREAS OF EXPERTISE**

Guidance, Navigation & Control Systems; Vehicle Dynamics; Manufacturing Systems, Hydraulics and Pneumatics; Energy/Power Systems; Thermal Management Systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

American Society of Mechanical Engineers, Fellow; Institute of Electrical and Electronic Engineers, Senior Member; Society of Automotive Engineers; National Fluid Power Association; International Federation of Automatic Control, American Association for the Advancement of Science; Defense Science Study Group.

**Dr. Michael J. Bear**
**BAE Systems**

**EDUCATION**

George Mason University
- Ph.D., Computational Physics, 1998
- M.S., Applied Physics, 1994

Purdue University
- B.S., Applied Physics, 1985

**WORK EXPERIENCE**

BAE Systems (Space Products and Processing)
- Technical Director- Systems Engineering 2015-Present
- Systems Engineering Lead – 2008-Present

BAE Systems/Lockheed Martin
- Managing Engineer for ASIC Design, Space Products, 2000-2007

Lockheed Martin
- Technical Lead of IP Development, Space Products, 1998-2000

Lockheed Martin/Loral
- Technical Lead of Device Modeling, Space Products, 1995-1998

Loral/IBM
- Technical Lead of Reliability Engineering, Space Products, 1990-1995

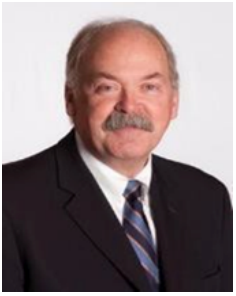
**AREAS OF EXPERTISE**

Systems Engineering; Resilient design (physical/cyber); Sensor system design; Cyber security for electronics design; ASIC design; Semiconductor/material physics of failure; Plasma and semiconductor modeling; Multi-scale simulations; Radiation effects; Space environments.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

BAE Systems Chairman's Award; US Patent Award; American Physical Society; Institute of Electrical and Electronic Engineers; American Association for the Advancement of Science; Phi Beta Kappa.

**Dr. David J. Bishop**
**Boston University**



**EDUCATION**

Cornell University:
- Ph.D., Physics, 1978
- M.S., Physics, 1977

Syracuse University
- B.S., Physics, 1973

**WORK EXPERIENCE**

Boston University
- Head, Division of Materials Science and Eng., 2011-Present
- Professor of Physics, 2011-Present
- Professor of Materials Science, 2011-Present
- Professor of Electrical and Computer Engineering 2011-Present
- Interim Associate Dean for Research and Grad Programs, 2013-2015

Bell Labs/AT&T/Lucent Technologies/Alcatel-Lucent
- Chief Technology Officer, LGS, 2007-2011
- Chief Operating Officer, LGS, 2007-2010
- President, Government Research & Security Solutions, 2006-2007
- Physical Sciences Research VP, 2005-2006
- Nanotechnology Research VP, 2003-2006
- President, New Jersey Nanotechnology Consortium, 2003-2006
- Optical Research VP, 2001-2003
- VP, Optical Networking Group, 2001-2003
- Director, Micromechanics Research, 1998-2001
- Department Head, Microstructures Physics Research, 1995-1998
- Department Head, Liquid Crystal Physics Research, 1988-1995
- Member of the Technical Staff, 1979-1988
- Postdoctoral Member of the Technical Staff, 1978-1979

**AREAS OF EXPERTISE**

Nanotechnology; low temperature physics; mechanical properties of materials at low temperatures; MEMS and NEMS; light wave networks; all-optical switching; superconductivity and super fluidity; magnetic vortices in superconductors and their phase transitions; Casimir effect; energy efficient networking; electron coherence effects; cybersecurity.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow of the American Physical Society; Member of the IEEE; Member of the MRS; Phi Beta Kappa, Syracuse University; Bausch and Lomb Honorary Science Award; Distinguished Member of the Technical Staff, AT&T Bell Labs; Gold Bell Labs President's Award, 2001: Bell Labs Team Award: Bell Labs Fellow; Nanotech Briefs Nano50 Innovator Award, 2006; Good Scout Award for leadership in local youth programs; AT&T Affirmative Action Award; American Physical Society's George E. Pake Prize, 2009.

**Mr. Aaron R. Blow**
**MITRE Corporation**

**EDUCATION**
Rensselaer Polytechnic Institute
M.S., Physics, 2002
B.S., Physics, 1996

**WORK EXPERIENCE**
MITRE
Director, Air Force Strategic and Special Capabilities, 2007-Present
MIT Lincoln Laboratory
Technical Staff, ISR Division, 2005-2007
MITRE
Director, Air Force Strategic and Special Capabilities, 2002-2005
XonTech, Inc.
Senior Analyst, Special Studies Division, 1997-2002

**AREAS OF EXPERTISE**
Systems Analysis; Mission Analysis; Space Systems; Intelligence, Surveillance, and Reconnaissance Systems; Signal Processing; Radar System Development; Hyperspectral Systems; Remote Sensing; Communications; Cyber; Multi-Sensor Fusion; Algorithm Development; Multi-Static Radar; Target Detection and Identification; Agile Acquisition; Command and Control; Systems Engineering; Modeling and Simulation; Electronic Warfare.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**
Member AFA; AUSA; NDIA.

**Dr. Robert Bontz**
**Northrop Grumman, Aerospace Systems**

**EDUCATION**
University of Utah
Ph.D., Theoretical Astrophysics, 1980
Northland College
B.A., Physics & Mathematics, 1974

**WORK EXPERIENCE**
Northrop Grumman Aerospace
Director/Technology Integration, Advanced Programs, 2013-Present
Institute for Defense Analyses
Project Director, SED, 1985-2013
Center for Naval Analyses
Research Scientist, 1981-1985
University of Utah
Instructor, Dept. of Physics, 1980-1981

**AREAS OF EXPERTISE**
Air Vehicle Design; Multi-Spectral Signature Control; Advanced Sensors; Advanced Weapons; Electronic Warfare; Special Technologies; Military Utility Assessment.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**
Defense Science Board Consultant.

**Dr. Alison K. Brown**
**NAVSYS Corporation**

**EDUCATION**

University of California, Los Angeles
Ph.D., Mechanics, Aerospace, and Nuclear Engineering, 1985
Massachusetts Institute of Technology
MSc, Aeronautics and Astronautics, 1981
Cambridge University
MA, Engineering, 1979

**WORK EXPERIENCE**

NAVSYS Corporation
President and Chief Executive Officer, 1986-Present
Litton Aero Products
GPS Systems Engineer, 1984-1986
Litton Guidance and Control
Systems Engineer, 1981-1984
Charles Stark Draper Lab
Draper Fellow, 1981

**AREAS OF EXPERTISE**

Positioning, navigation and timing (PNT), Global Positioning System (GPS), Global Navigation Satellite Systems (GNSS), PNT Augmentation systems, Assured PNT, Network-assisted PNT, Anti-jamming signal processing, Software Defined Radios (SDR).

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Institute of Navigation Fellow; Honorary Fellow of Sidney Sussex College, Cambridge; Member of International Woman's Forum; National Defense Industrial Association (NDIA) Board of Trustees; NDIA Rocky Mountain Chapter Small Business Vice-President; Region VIII Small Business Regulatory Fairness Board; 2009-present: Master of Foxhounds, Headwaters Hounds; 2013-present: President of Salida Business Incubator and Tri-Lakes Business Incubator; 2010-present: Board Member, Small Business Technology Council; 2007-Present: Chair, District 13 Rhodes Scholar Selection; 2007-2010: MIT Corporation Development Committee (CDC); 2006-present: Board Member, Mountain States Employers Council; 1994-2016: Member, Air Force Scientific Advisory Board; 1999-2004: Member, Air Force C2ISR Center Advisory Group; 2002-2004: Member, Interagency GPS Executive Board Independent Advisory Team (IGEB IAT); 1998-2002: GPS-3 Independent Review Team; 1993-1995, 1988: Secretary, RTCA SC-159 GPS Integrity Channel (GIC) Working Group; 1987-1988: Chairman, RTCA SC-159 Integrity Working Group; 1986-1988: Associate Research Professor, University of Colorado at Colorado Springs.

**Dr. Steven F. Butler**
**The John Hopkins University Applied Physics Lab**

**EDUCATION**

University of Florida
- Ph.D., Aerospace Engineering, 1985
- M.S., Electrical Engineering, 1978
- B.S., Physics and Astronomy, 1976

**WORK EXPERIENCE**

The John Hopkins University Applied Physics Lab
- Senior Advisor for Advanced Development, 2016-Present

Doolittle Institute
- Executive Director, 2014-2016

University of Florida
- Adjunct Professor, 2013-Present

Air Force Material Command
- Executive Director, SES, 2008-2013

Warner Robins Air Logistics Center
- Executive Director, SES, 2007-2008

Air Force Material Command
- Director of Engineering, 2004-2007

Eglin Air Force Base
- Director of Engineering, SES, 1999-2004

Office of the Secretary of Defense
- Deputy Associate Director, Air Warfare, SES, 1996-1999

Air Force Research Laboratory
- Senior Scientist, Weapons Directorate, 1982-1996

**AREAS OF EXPERTISE**

Directed Energy; Electro-Magnetics, Radar, Electro-Optics, Nuclear & Conventional Weapons, Systems Engineering.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Senior Member, IEEE; Directed Energy Professional Society; American Radio Relay League (Licenses - Extra Class, First Class Radiotelephone with Radar Endorsement).

**Dr. Mark E. Campbell**
**Cornell University**

**EDUCATION**

Massachusetts Institute of Technology
Ph.D., Control/Estimation, Aeronautics and Astronautics, 1996
Massachusetts Institute of Technology
M.S., Aeronautics and Astronautics, 1993
Carnegie Mellon University
B.S., Mechanical Engineering, 1990

**WORK EXPERIENCE**

Cornell University
Professor, Sibley School of Mechanical and Aerospace Engineering, 2011-Present
Associate Professor, Sibley School of Mechanical and Aerospace Engineering, 2004-2011
Assist Professor, Sibley School of Mechanical and Aerospace Engineering, 2001-2004
University of Sydney
Australian Research Council Int'l Fellow, Australian Centre of Field Robotics, 2006-2005
Insitu Group
Visiting Research Scientist, Research and Development, 2005-2001
University of Washington
Assist Professor, Sibley School of Mechanical and Aerospace Engineering, 1997-2001

**AREAS OF EXPERTISE**

Spacecraft technologies; control systems; sensor fusion; autonomy; UAV technology; robotics; sensor networks; mixed initiative and human-machine systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Associate Fellow AIAA; Member ASME; Member IEEE; Member SPIE; Member ASEE.

**Gen Bruce A. Carlson, USAF (Ret)**
**Consultant**

**EDUCATION**
Naval War College
M.A., Strategic Studies, 1989
Webster University
M.A., Business Management, 1980

**WORK EXPERIENCE**
Johns Hopkins University
Consultant, 2016-Present
Church of Jesus Christ of Latter-Day Saints
Seventy, General Authority, Middle East/Africa North Area, 2012-2015
National Reconnaissance Office
Director, 2009-2012
Self Employed
Consultant, 2009-2012
United States Air Force
Commander, Air Force Material Command, 2005-2009

**AREAS OF EXPERTISE**
Program Management; Human Factors; Conventional warheads and effects; Lethality; Nuclear warheads and effects; Electromagnetics and Signatures; Cyber Defense/Offense; RF sensors; EO/IR sensors; Airbreathing Propulsion; Rocket and Space Propulsion.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**
Air Force ROTC Distinguished Alumni Award, 2014; National Intelligence Distinguished Service Award, 2012; DoD Medal for Distinguished Public Service, 2012; James V. Hartinger Award for Distinguished Service in the Field of Military Space, 2012; Air Force Association, Wright Memorial Chapter, Heritage Award, an annual award given to a single active duty leader for the most significant contribution by a military member to Air Force programs, 2008; Air Force Association, National H.H. Arnold Award, an annual award given to a single active duty leader for the most significant contribution by a military member to national defense, 2008; Air Force Order of the Sword, highest award given to an officer by the enlisted men and women of a Major Command, 2008; University of Minnesota Distinguished Alumni Award, 2006; Brainerd High School Distinguished Alumni Award, 2001.

**Dr. Werner J.A. Dahm**
**Arizona State University**

**EDUCATION**

California Institute of Technology
Ph.D., Aeronautics, 1985
University of Tennessee Space Institute
M.S., Mechanical Engineering, 1981
University of Alabama in Huntsville
B.S.E., Mechanical Engineering, 1978

**WORK EXPERIENCE**

Arizona State University, 2010-Present
Founding Director and Chief Scientist, Security and Defense Systems Initiative
Chief Technical Officer, ASU Research Enterprise (ASURE)
ASU Foundation Professor of Aerospace and Mechanical Engineering
U.S. Air Force, Headquarters, Pentagon
Chief Scientist of the U.S. Air Force (AF/ST), 2008-2010
University of Michigan, Department of Aerospace Engineering
Head, Laboratory for Turbulence & Combustion, 1991-2010
Professor, Associate Professor, Assistant Professor, 1985-2010
Defense Science Board (DSB)
21st Century Defense Technology Task Force, 1999
Joint Operations Superiority in the 21st Century Task Force, 1998
Joint Advanced Strike Technology Task Force, 1994
Tactical Air Warfare Task Force, 1993
Institute for Defense Analyses
Member, Defense Science Study Group (DSSG), 1990-1992
Consultant, 1989-1999
U.S. Air Force Arnold Engineering Development Center (AEDC)
Research Engineer, 1979-1981

**AREAS OF EXPERTISE**

Defense science and technology, technology assessment, air vehicle and space systems, air-breathing and rocket propulsion, fluid dynamics, turbulence, reacting flows, combustion, flow and combustion measurement, modeling and simulation, microsystems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow, American Physical Society; Fellow, American Institute of Aeronautics & Astronautics; U.S. Air Force Decoration for Exceptional Civilian Service; Emeritus Professor, University of Michigan; George J. Huebner Research Excellence Award, University of Michigan; 1938E Distinguished Achievement Award, University of Michigan; William F. Ballhaus Aeronautics Prize, Caltech; Member, APS/DFD Executive Committee; Member, American Physical Society (APS); Member, American Institute of Aeronautics & Astronautics (AIAA); Member, American Society of Mechanical Engineers (ASME); Member, Combustion Institute.

**Dr. Cristina E. Davis**
**University of California, Davis**

**EDUCATION**

The Johns Hopkins University
Postdoctoral Fellow, Physiology/Electrical Engineering, 2001
University of Virginia
Ph.D., Biomedical Engineering, 1999
Duke University
B.S., dual major Mathematics and Biology, 1994

**WORK EXPERIENCE**

University of California, Davis
Professor, Mechanical and Aerospace Engineering, 2012-Present
Associate Director, UC Davis Clinical & Translational Sciences Center, 2010-Present
Associate Professor, Mechanical and Aerospace Engineering, 2010-2012
Assistant Professor, Mechanical and Aerospace Engineering, 2005-2010
The Charles Stark Draper Laboratory
Group Leader, Bioengineering, 2004-2005
Principal Member of the Technical Staff, Bioengineering, 2004-2005
Senior Member of the Technical Staff, 2002-2004
Molecular Devices Corporation
Senior Scientist, Cytion SA (Lausanne, Switzerland), 2001-2002

**AREAS OF EXPERTISE**

Biomedical engineering; mechanical engineering; bioinstrumentation; biomarkers; microfluidics; microelectromechanical sensors (MEMS); nanotechnology; clinical trials; biosensors; chemical sensors; machine learning and data analysis.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Associate Director of the UC Davis Clinical and Translational Sciences Center, which is a part of the NIH NCATS program; 2010 Hartwell Fellow; Editorial Board Member for Journal of Breath Research; Ad Hoc Associate Editor and Guest Editor for IEEE Sensors Journal; selected for 2007 National Academies Keck Futures Initiative; contributed text for two National Research Council scientific reports (2008, 2009); selected for 2008 National Academy of Engineering's 17th Annual Frontiers of Engineering Education Symposium; awarded two "Outstanding Service as a Competition Judge" awards (2007, 2012) and former lead engineering judge for The Siemens Foundation and The College Board; selected for 2009 "MNS Horizons 2040" NSF workshop; 2013 finalist award from the Association of American Medical Colleges Award for Innovative Institutional Partnerships in Research and Research-Focused Training; UC Davis "Leadership Program" (Office of Vice Provost Academic Affairs); Member, Executive Committee for the World Food Center. 2016 Fellow, American Institute for Medical and Biological Engineering (AIMBE) and 2016 UC Davis Chancellor's Innovation Award.

**Dr. Jeffery L. Emdee**
**The Aerospace Corporation**
**S&T Reviews Chair**

**EDUCATION**

The Aerospace Institute
Systems Engineering Certificate Program, 1996
Princeton University
Ph.D., Mechanical and Aerospace Engineering, 1991
University of California, Irvine
B.S., Mechanical Engineering, 1986

**WORK EXPERIENCE**

The Aerospace Corporation
General Manager, Launch Systems Division, 2015-Present
General Manager, Vehicle Systems Division, 2012-2015
Principal Director, Payload Integration and Mission Planning, 2008-2012
Chief Systems Engineer, Atlas V Operations, 2004-2008
Director, Propulsion Department, 1998-2004
Section Manager, Propulsion Department, 1997-1998
Technical Staff and Engineering Specialist, Propulsion Department, 1990-1997

**AREAS OF EXPERTISE**

Propulsion; Combustion Chemistry; Cryogenics; Test Processes; Launch Vehicles; Space Mission Design and Analyses; Space Systems; Failure Investigation and Risk Assessment Processes.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

International Astronautical Federation, Congress session co-chair, 2004-present; JANNAF Liquid Propulsion Subcommittee – member of the Technical Steering Group and Chair of Test Practices and Standards Panel, 2003-2006; AIAA Associate Fellow; AIAA Ground Test Tech Committee, Vice Chair Propulsion Subcommittee, 1999-2002; AIAA Liquid Propulsion Tech Committee, 1995-1997.

**Dr. Mica R. Endsley-Jones**
**SA Technologies, Inc.**

**EDUCATION**

University of Southern California
Ph.D., Industrial & Systems Engineering, 1990
Purdue University
M.S.I.E., Industrial Engineering, 1985
Texas Tech University
B.S.I.E., Industrial Engineering, 1982

**WORK EXPERIENCE**

SA Technologies, Inc.
President, 2015-Present
President, 1997- 2013
United States Air Force
Chief Scientist, 2013-2015
Massachusetts Institute of Technology
Visiting Associate Professor, Aeronautics & Astronautics, 1996-1997
Texas Tech University
Associate Professor, Industrial Engineering, 1995-1997
Assistant Professor, Industrial Engineering, 1990-1995
Northrop Corporation
Engineering Specialist, Aircraft Division, 1989-1990
Senior Engineer, Aircraft Division, 1987-1989
Engineer II, Aircraft Division, 1986-1987
Engineer, Aircraft Division, 1985-1986

**AREAS OF EXPERTISE**

Situation awareness; human-systems integration; automation and autonomy; information fusion; decision-making and decision support systems; systems engineering.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Human Factors & Ergonomics Society; Aerospace Medical Association; Journal of Cognitive Engineering and Decision Making Advisory Board; Theoretical Issues in Ergonomics Science Associate Editor.

**Dr. Charbel Farhat**
**Stanford University**

**EDUCATION**

University of California, Berkeley
- Ph.D., Civil Engineering, 1986
- M.S., Electrical Engineering and Computer Sciences, 1986
- M.S., Structural Engineering and Structural Mechanics, 1984

Université de Paris VI, France
- M.S., Applied Mechanics, 1983

Ecole Centrale des Arts et Manufactures, France
- B.S., Engineering, 1983

**WORK EXPERIENCE**

Stanford University
- Chairman, Department of Aeronautics and Astronautics, 2008-Present
- Vivian Church Hoff Professor of Aircraft Structures, 2008-Present
- Director, Army High Performance Computing Research Center, 2007-Present
- Director, King Abdullah City of S&T Center of Excellence for Aeronautics and Astronautics, 2014-Present
- Professor, Department of Aeronautics and Astronautics, 2008-Present
- Professor, Department of Mechanical Engineering, and Inst. for Computational and Mathematical Engineering, 2004-Present

University of Colorado at Boulder
- Chairman, Department of Aerospace Engineering Sciences, 2000-2004
- Interim Chair, Department of Aerospace Engineering Sciences, 1999-2000
- Director, Center for Aerospace Structures, 1996-2004
- Professor, Department of Aerospace Engineering Sciences, Center for Aerospace Structures, and Center for Applied Parallel Processing, 1995-2004
- Associate Professor, Depart. of Aerospace Engineering Sciences, Center for Aerospace Structures, Center for Space Construction, and Center for Applied Parallel Processing, 1990-1995
- Assistant Professor, Depart. of Aerospace Engineering Sciences, Center for Space Structures and Controls, Center for Space Construction, and Center for Applied Parallel Processing, 1987-1990

**AREAS OF EXPERTISE**

Acoustic Scattering; Aeroelasticity; Aerothermodynamics; Computational Science and Engineering; Coupled Field Problems; Dynamic Data-Driven Systems; Finite Element Approximation; Fluid-Structure Interaction; High Performance Computing; Implosion; Model Reduction; Multiscale Analysis; Numerical Analysis; Real-Time Computing.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Member, Royal Academy of Engineering (UK); Member, National Academy of Engineering; Knighted, Chevalier dans l'Ordre des Palmes Academiques (France); Fellow, American Institute of Aeronautics and Astronautics (AIAA); Fellow, American Society of Mechanical Engineers (ASME); Fellow, International Association for Computational Mechanics (IACM); Fellow, Society of Industrial and Applied Mathematics (SIAM); Fellow, US Association of Computational Mechanics (USACM); Fellow, World Innovation Foundation (WIF).

**Dr. John J. Fratamico Jr.**
**Leidos**

**EDUCATION**

Massachusetts Institute of Technology
- Ph.D., EE, 1983
- S.M., EE, 1980
- S.B., EE, 1980

**WORK EXPERIENCE**

Leidos
- Chief Technology Officer and President, Technology Group, 2013-Present

Science Applications International Corporation
- General Manager, Surveillance & Reconnaissance Business Unit, 2005-2013
- Operations Program Manager and Department GM, C3IT Business Unit, 2000 - 2005
- Chief Engineer & PM, Technology Research Group, 1989-2000

McDonnell Douglas Technologies (formerly Alcoa Defense System and Global Analytics)
- Chief Scientist and Advanced Technologies Manager, 1983-1989

MIT Lincoln Laboratory
- Member of Technical Staff (consultant), Satellite Communications, 1980-1982

**AREAS OF EXPERTISE**

Signature control (principally RF and EO); Intelligence, Surveillance & Reconnaissance collection and processing; Multi-sensor and multi-platform fusion; EW (principally EA and EP processing); Next generation weapons effects (e.g. directed energy); Command & Control system modernization; Autonomous systems; Simulation based training systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow, John & Fannie Hertz Foundation; Former Chairman, San Diego IEEE Chapters for Antennas & Propagation and Microwave Theory & Techniques; Council of Advisors to UCSD Dean of Engineering; Former instructor, UCLA extension class on Radar Cross Section.

**Lt Gen Terry L. Gabreski, USAF, (Ret)**
**Consultant**

**EDUCATION**
Louisiana State University
B.A., History, 1973
Golden Gate University
Master's Degree, Public Administration, 1978

**WORK EXPERIENCE**
Pratt and Whitney
Consultant, 2013-Present
Northrup Grumman
Consultant, 2012-2014
AF Scientific Advisory Board- Combating Sexual Assault in the US Air Force Study
Consultant, 2013-2014
National Museum of the United States Air Force
Heritage Board of Directors, 2010-Present
Falcon Foundation
Governing Trustee/Board of Trustees, 2010-Present
Rand Corporation
Adjunct Staff, 2011-Present
USAF Active Duty, 1974-2010

**AREAS OF EXPERTISE**
Sustainment, logistics, aircraft maintenance, training, program management.

**Dr. Ryan "Skip" Garibaldi**
**Institute for Defense Analyses**

**EDUCATION**

UC San Diego
Ph.D., Mathematics, 1998
Purdue University
B.S., Mathematics [honors] and Computer Science, 1992

**WORK EXPERIENCE**

Institute for Defense Analyses
Research staff member, Center for Communications Research, 2015-Present
UCLA
Associate Director, Institute for Pure & Applied Mathematics, 2013-2015
Hedrick assistant professor & VIGRE assistant professor, Dept. of Mathematics, 1999-2002
Emory University
Professor, Dept. of Mathematics & Computer Science, 2002-2015
Artois University, France
Professeur invite, 2006
University of Paris 13, France
Professeur invite, 2004
ETH (Swiss Federal Institute of Technology), Zurich
Postdoc, Dept. of Mathematics, 1998-1999

**AREAS OF EXPERTISE**

Mathematics, especially algebraic groups, Lie groups, and probability.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Member: American Mathematical Society, Mathematical Association of America; Defense Science Study Group, 2012-2013.

**Dr. Samuel Graham Jr.**
**Georgia Institute of Technology**

**EDUCATION**

Georgia Institute of Technology
PhD, Mechanical Engineering, 1999
Georgia Institute of Technology
MS, Mechanical Engineering, 1995
Florida State University
BS, Mechanical Engineering, 1993

**WORK EXPERIENCE**

Georgia Institute of Technology
Professor, Mechanical Engineering, 2003-Present
Sandia National Laboratories
Senior Member of Technical Staff, 1999-2003

**AREAS OF EXPERTISE**

Heat transfer, thermal metrology; materials characterization; thermal management; rf electronics, flexible electronics; organic electronics, electronics packaging.

**Dr. Eric Hall**
**The Aerospace Corporation**

**EDUCATION**

Georgia Institute of Technology
Ph.D., Aerospace Engineering, 1991
Georgia Institute of Technology
M.S., Aerospace Engineering, 1989
University of Delaware
Bachelor of Mechanical Engineering, 1988

**WORK EXPERIENCE**

The Aerospace Corporation
General Manager, Vehicle Systems Division, 2015-Present
Principal Director, Atlas V Operations, 2011-2015
Principal Engineer, Atlas V Operations, 2008-2011
Director, Structures Department, 2004-2008
Associate Director, Structures Department, 2002-2004
Manager, Space Structures Section, 2000-2002
Engineering Specialist, Structural Technology Department, 1997-2000
Member of Technical Staff, Structural Technology Department, 1991-1997

**AREAS OF EXPERTISE**

Technical and personnel management; vehicle engineering; mission assurance; risk assessment; launch operations; independent review teams; design and development of launch and space vehicles; large-scale deployable space structures; opto-mechanical systems; lightweight and deployable optical systems; technology development; composite spacecraft; precision structures; finite element analysis; adaptive / smart structures; vibration isolation; structures; and structural dynamics.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Sr. Member, AIAA.

**Dr. Juliana Hsu**
**Lawrence Livermore National Laboratory**

**EDUCATION**

Massachusetts Institute Technology
Ph.D., Physics, 1991
University of Hawaii at Manoa
B.S., Physics, 1985
University of Hawaii at Manoa
B.S., Mathematics, 1985

**WORK EXPERIENCE**

Lawrence Livermore National Laboratory
Deputy Program Director, Weapon Physics and Design, 2016-Present
Distinguished Member of Technical Staff Emeritus, 2016-Present
Distinguished Member of Technical Staff, 2013-2015
Group Leader, Primary Nuclear Design, Weapon Physics Design Division, 2012-2015
Lead Primary Designer, Joint W78/W88-1 Warhead Life Extension Program, 2010-2014
Point of Contact for Primary Design, Advanced Certification Campaign, 2007-2015
Lead Primary Designer, Reliable Replacement Warhead Program, 2005-2007
Designer on the Primary Design Team, W80-3 Left Extension Program, 1999-2005
Code Developer, ALE3D Code, 1996-1999

**AREAS OF EXPERTISE**

Nuclear Weapon Design; nuclear weapon physics; weapon systems design; high explosives; integrated experiments; simulation tools and application.

**Dr. Ann R. Karagozian**
**University of California, Los Angeles**

**EDUCATION**

California Institute of Technology
Ph.D., Mechanical Engineering, 1982
California Institute of Technology
M.S., Mechanical Engineering, 1979
University of California, Los Angeles
B.S., Engineering, 1978

**WORK EXPERIENCE**

University of California, Los Angeles
Distinguished Professor, Mechanical & Aerospace Engineering, 2016-Present
Interim Vice Chancellor for Research, 2016-2017
Professor, Mechanical & Aerospace Engineering, 1993-2016
Associate Professor, Mechanical & Aerospace Engineering, 1988-1993
Assistant Professor, Mechanical & Aerospace Engineering, 1982-1988
Institute for Defense Analyses
Member, Board of Trustees, 2011-Present
Mentor, Defense Science Study Group, 2014-Present
Member, Defense Science Study Group, 1994-1995
Sandia National Laboratories
Consultant, 2003-2005
Pacific-Sierra Research Corporation
Consultant, 1985-1987
RAND Corporation
Consultant, 1979-1983
Aerospace Corporation
Associate Member, Technical Staff, 1978
Hughes Aircraft Company
Engineering Intern, 1976-1978

**AREAS OF EXPERTISE**

Fluid mechanics; combustion; air-breathing and rocket propulsion; energy generation systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow of the American Physical Society; Fellow of the American Institute of Aeronautics and Astronautics; Fellow of the American Society of Mechanical Engineers; Air Force Decoration for Exceptional Civilian Service (2010, 2001); UCLA Samueli and TRW Excellence in Teaching Awards; Phi Beta Kappa; Tau Beta Pi; American Physical Society/Division of Fluid Dynamics (Division Councilor, former Chair); Combustion Institute; Society for Industrial & Applied Mathematics.

**Dr. Leo Kempel**
**Michigan State University**

**EDUCATION**

University of Michigan
Ph.D., Electrical Engineering, 1994
University of Michigan
M.S., Electrical Engineering, 1990
University of Cincinnati
B.S., Electrical Engineering, 1989

**WORK EXPERIENCE**

Michigan State University
Dean of Engineering, 2014-Present
Acting Dean of Engineering, 2013-2014
Associate Dean for Research, 2008-2013
Associate Dean for Special Initiatives, 2006-2008
Professor, Electrical and Computer Engineering, 2006
Director, High Performance Computing Center, 2004-2006
Associate Professor, Electrical and Computer Engineering, 2002-2006
Assistant Professor, Electrical and Computer Engineering, 1998-2002
Air Force Research Laboratory
IPA (50%), Sensors Directorate, WPAFB, OH, 2004-2008
Mission Research Corporation
Senior Research Engineer, Valparaiso, FL, 1994-1998

**AREAS OF EXPERTISE**

Applied Electromagnetics; conformal apertures; computational electromagnetics; low observables; directed energy; modeling and simulations; materials for radio frequency applications.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Institute of Electrical and Electronics Engineers, Fellow; Applied Computational Electromagnetics Society, Fellow.

**Dr. Tadayoshi Kohno**
**University of Washington**

**EDUCATION**

University of California San Diego
Ph.D., Computer Science, 2006
University of California San Diego
M.S., Computer Science, 2004
University of Colorado
B.S., Computer Science, 1999

**WORK EXPERIENCE**

University of Washington
Professor, Computer Science & Engineering, 2016-present
Associate Professor, Computer Science & Engineering, 2011-2016
Assistant Professor, Computer Science & Engineering, 2006-2011
Microsoft
Visiting Researcher, Microsoft Research, 2014-2014
Cigital
Cryptographer, Software Security Group, 2000-2001
Counterpane Systems
Cryptographer, Security Consultant Group, 1999-2000

**AREAS OF EXPERTISE**

Computer security; computer privacy; cyber security; applied cryptography; cloud security; cyber-physical systems security; cyber security for emerging technologies; embedded systems security; mobile device security; usable security; threat modeling; web security.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Inaugural Member, Forum on Cyber Resilience, The National Academies of Sciences, Engineering, and Medicine, 2014-present; Founding Member, IEEE Center for Security Design, 2014-present; Member, Defense Science Study Group, 2014-2015; Senior Member, Institute of Electrical and Electronics Engineers (IEEE), 2012-present; Steering Committee Member, USENIX Security Symposium, 2012-present; Steering Committee Member, Network and Distributed Systems Security Symposium, 2011-2014

**Mr. Patrick J. Lardieri**
**Lockheed Martin Mission Systems and Training**

**EDUCATION**

University of Pennsylvania
M.S., Electrical Engineering, 1993
Rutgers University
B.S., Electrical Engineering, 1990
B.A., Mathematics, 1990

**WORK EXPERIENCE**

Lockheed Martin
Lockheed Martin Fellow, Mission Systems and Training, 2013-Present
Research Manager, Advanced Technology Laboratories, 2004-2013
Principal Engineer, Advanced Technology Laboratories, 2001-2004
Senior Engineer, Advanced Technology Laboratories, 1993-2001
GE Aerospace (acquired by Lockheed)
Member Engineer, Government Communication Systems, 1990-1993

**AREAS OF EXPERTISE**

Real-time distributed computing; middleware; cyber-security; cyber-testing; systems engineering.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Senior Advisory Board, AJ Drexel Cybersecurity Institute, January 2015-present; Executive Steering Committee, Drexel University Department of Computer Science, December 2012-Present.

**Gen Lester L. Lyles, USAF (Ret)**
**General Dynamics Corporation**

**EDUCATION**

Howard University
Bachelor's Degree, Mechanical Engineering, 1968
New Mexico State University
M.S., Mechanical Engineering, 1969
National War College
Master's Degree, 1985
Defense Systems Management College
Master's Degree, 1980
Armed Forces Staff College
Master's Degree, 1981
Air Force Institute of Technology
M.S., 1981
New Mexico State University
Honorary Doctorate of Law, 2002
Urbana University
Honorary Doctorate of Law, 2009

**WORK EXPERIENCE**

General Dynamics Corporation
Director, Member of Nominating & Corporate Governance Committee and Member of Audit Committee, 2003-Present
BAE Systems Science & Technology, Inc.
Director, 2003-Present
DPL, Inc.
Director, Vice Chairman of Nominating & Corporate Governance Committee 2004-Present
Member of Compensation Committee & Director of the Dayton Power & Light Company 2004-Present
United Services Automobile Association
Chairman, 2004-Present

**AREAS OF EXPERTISE**

Aircraft, air vehicles, and air platforms; Air breathing propulsion.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Air Force Scientific Advisory Board.

**Mr. Darcy P. McGinn**
**Orbital ATK Defense Electronic Systems**

**EDUCATION**

University of Southern California
Graduate Studies, Signal Processing & Fuzzy Systems/EE, 1992
Rice University
M.S., Signal Processing & Communication Theory/EE, 1982
Tulsa University
B.S., Coherent Optical Processing/Engineering Physics, 1978

**WORK EXPERIENCE**

Orbital ATK, Inc.
Chief Technology Officer, Director Advanced Missile Programs Program Director AARGM, 2003-Present
Science and Applied Technology (SAT)
Director Science and Engineering, 2000-2003
Litton GC&S
Director Engineering, Electronics Products, 1999-2000
Northrop Grumman
Director Systems Engineering, Chief Engineer Brilliant Anti-Tank, 1985-1999
MIT Lincoln Laboratory
Staff Scientist, Lead Engineer Distributed Sensor Network, 1982-1985
Amoco Research Laboratories
Exploration Geophysicist, 1978-1982

**AREAS OF EXPERTISE**

Weapon System Architecting; Signal and Data Processing, Guidance Navigation and Control; Electronic Warfare; Active/Passive Sensors/Seekers; Lethality Analysis; Cyber Offense; Threat Analysis; Mission/Campaign Effectiveness Analysis; Complex Simulation Development, Verification, and Validation; Oral/Written Communications.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Tau Beta Pi National Engineering Society; Association of Old Crows; Air Force Association; NDIA; Army Aviation Association of America; Order of Saint Barbara (Honor Society for Army and Marine Corps Artillery).

**Dr. David F. McQueeney**
**IBM Corporate Headquarters**

**EDUCATION**

Cornell University
- Ph.D., Solid State Physics, 1988
- M.S., Solid State Physics, 1984

Dartmouth College
- A.B., Physics, 1980

**WORK EXPERIENCE**

IBM Corporate Headquarters
- Vice President, Corporate Technology 1988-Present

IBM Research
- Vice President, Cloud Computing and Next-Generation Systems, 2013-2015
- Vice President, Software, 2011-2013
- Vice President, Communication Technology and Director Zurich Research Laboratory, 1998- 2001
- Director, Software Technology, 1993-1995
- Researcher and Manager, 1998-1993

IBM Federal
- Vice President and CTO, 2004-2011

IBM Global Services
- Vice President, Asset Commercialization and Intellectual property, 2011-2004

IBM Sales and Distribution
- General Manager, Global Government Solutions, 1995-1998

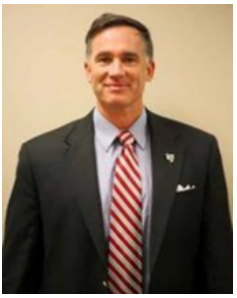
**AREAS OF EXPERTISE**

Solid State Physics, high-speed interconnect design, microprocessor and systems architecture, distributed computing and software development tools, cloud infrastructure and platform technologies, co-founded a startup software company in scientific data analysis while in graduate school.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

IEEE, APS, NDIA, AFEI.

**Dr. William L. Melvin**
**Georgia Tech Research Institute (GTRI)**



**EDUCATION**

Lehigh University
- Ph.D., Electrical Engineering 1994
- M.S., Electrical Engineering 1992
- B.S., Electrical Engineering 1989

**WORK EXPERIENCE**

Georgia Institute of Technology, Georgia Tech Research Institute
- Director, Sensors & Intelligent Systems Directorate, and Deputy Director, GTRI, 2014-Present
- Director, Sensors & Electromagnetic Applications Laboratory, GTRI, 2006-2014
- Regents' Researcher Engineer, GTRI, 2005-2013
- Director, Adaptive Sensor Technology Project Office, GTRI/SEAL, 2003-2006
- Adjunct Professor of ECE, Center for Signal and Image Processing, 2003-Present
- Senior Research Engineer, GTRI, 2001-2005
- Research Engineer II, GTRI, 1998-2001

United States Air Force Reserves (Major, Honorably Discharged)
- Air Force Research Laboratory, Sensors Directorate, 1998-2005
- Air Force Rome Laboratory, Surveillance and Photonics Directorate, 1994-1998

Lehigh University
- Research Assistant/Teaching Assistant, 1998-1993

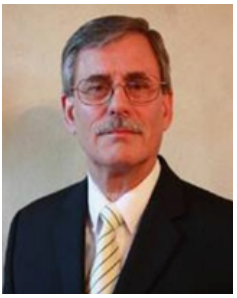
**AREAS OF EXPERTISE**

Sensors; sensor signal processing; multi-intelligence exploitation; electronic warfare; physics-based modeling and simulation; antenna technology; machine learning and intelligent systems; radar, sonar, communication systems, SIGINT, MASINT; ISR; fire-control systems; threat systems exploitation.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

IEEE AESS Warren D. White Award (2014); Military Sensing Symposium (MSS) Fellow (2012); Best paper award, 2010 Int'l Radar Conf. (2010); Best Poster Presentation, 55th Tri-Service Radar Symp. (2009); IEEE Fellow (2008); Best Poster Presentation, 53rd Tri-Service Radar Symposium (2007); University Leadership Program, Georgia Institute of Technology (2006- 2007); IEEE AESS Nathanson Memorial Young Engineer of the Year (2006); Air Force Research Laboratory Reservist of the Year (2003); Air Force Material Command Engineering & Technical Management Reservist of the Year (2002); Squadron Officer School (2000); AFRL Sensors Directorate Technical Achievement Award (2001); Outstanding Original Paper Award, 1997 IEEE National Radar Conference (1997); Air Force Association "Man of the Year" (Rome Chapter) (1996); Major General John J. Toomay Award for Excellence in Military Engineering (1996); Rome Laboratory Company Grade Officer of the Year (1995); Distinguished Graduate, USAF ROTC Program (1989); US Army Airborne School (1988); Tau Beta Pi Engineering Honor Society (1988); Eta Kappa Nu Electrical Engineering Honor Society (1988).

**Mr. Stephen C. Merriman**
**American Systems Corporation**



**EDUCATION**

DoD Systems Management College
Certificate, Program Management, 1976
The American University
M.A., Psychology, 1971
Transylvania University
B.A., Psychology, 1967

**WORK EXPERIENCE**

American Systems Corporation
Human Systems Integration Specialist, 2016-Present
The Boeing Company
Sr. Systems Engineer/Sr. Manager, Defense, Space and Security, 1987-2015
Department of Defense Training and Performance Data Center
Branch Manager, Training Technology Transfer/Ranges, 1985-1986
Naval Air Development Center
Branch Manager, Crew Systems Division, 1981-1985
Naval Air Systems Command
Engineering Psychologist/Branch Manager, Crew Systems Division, 1967-1981

**AREAS OF EXPERTISE**

Military systems acquisition, RDT&E management, human factors engineering, crew station integration, user interface design and training system development on a wide variety of military aircraft, ground combat vehicles, unarmed vehicles, and command and control systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Human Factors and Ergonomics Society Fellow; Boeing Associate Technical Fellow (retired); Aerospace Medical Association Associate Fellow; Member, AsMA Human Factors Association; Member, DoD Human Factors Engineering Technical Advisory Group; Member, DoD Human Systems Integration Task Force; Professional Member, US Navy Aerospace Experimental Psychology Society; Member, Association of Aviation Psychologists; Member and HSI Committee Chair, SAE International; Member and past Technical Group Chair, Human Factors and Ergonomics Society; Member, SAFE Association. Recipient of SAE International James M. Crawford Technical Standards Board Outstanding Achievement Award (2015).

**Dr. Kenneth R. Olson**
**The Johns Hopkins Applied Physics Laboratory**

**EDUCATION**

University of Wisconsin
- Ph.D. Dissertation: Time Dependent Neutral Particle Transport, 1999
- M.S., Nuclear Engineering and Engineering Physics, 1996
- B.S., Nuclear Engineering and Engineering Physics, 1994

**WORK EXPERIENCE**

Johns Hopkins University Applied Physics Laboratory
- Program Manager: OSD/CAPE TACAIR Red Team, 2014-Present
- Principle Analyst, IADS-CCT USAF ACC/A8Z, 2012-Present
- Chief Analyst, OSD/CAPE TACAIR Red Team, 2008-2014
- Modeling Lead, USN PMA-234 JATO modeling and simulation, 2008-2011
- Principle Analyst, AFRL investigation of novel electronic attack systems, 2008-Present
- Modeling SME, USN Naval CONEMPs / HICAP working group 2008-Present
- Principle Analyst, USN Next Generation Jammer, 2009-Present

Massachusetts Institute of Technology, Lincoln Laboratory
- Staff, MIT Rapid Capabilities Office Red Team, 1999-2007
- Principle Analyst, USAF Red Team, Operation Iraqi Freedom after-action study, 2003-2005
- Analyst, USAF Red Team, Operation Allied Force after-action study, 1999-2003

**AREAS OF EXPERTISE**

Survivability of legacy and advanced aircraft and weapons in an A2AD environment; Effectiveness of current and future electronic attack and protection; High fidelity engagement / mission level modeling effectiveness and optimization; Capabilities and limitations of ISR and reconnaissance systems; Vulnerability of PGM to threats; Capabilities and CONOPS of potential threat systems.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Association of Old Crows, American Nuclear Society.

**Dr. Patric L. Patterson**
**Utah State University**

**EDUCATION**

Utah State University
- Ph.D., Space Systems/Electrical Engineering, 2005
- M.S., Electrical Engineering, 1990
- B.S., Electrical Engineering, 1989

**WORK EXPERIENCE**

Space Dynamics Laboratory, Utah State University
- Director, Advanced Concepts, 2015-Present
- Director, Military Space & Technology Innovation, 1998-2015
- Sensor Systems Engineer, 1997-1998
- Experiment Director, U.S.A.F. Phillips Laboratory, 1993-1997
- Electrical Engineer, 1992-1993

Utah State University Research Foundation
- Chairman, AIAA/USU Conference on Small Satellites, 2000-present

Utah State University/Electrical and Computer Engineering Department
- Adjunct Assistant Professor, 2008-present

Utah State University
- Program Coordinator, NASA Affiliated Research Center, 1998-1999
- Chief of Staff, Rocky Mountain Space Grant Consortium, 1992-1993

Honeywell Inc.
- Systems Engineer, 1990-1992

**AREAS OF EXPERTISE**

Space Systems; Small Satellite Technologies; Space Situational Awareness; Rendezvous and Proximity Operations; Laser Operations; Controls; Astrodynamics; EO/IR Sensors.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Chairman, AIAA/USU Conference on Small Satellites (2000-Present); Technical Committee Member, European Space Agency Small Satellites Systems and Services Conference (2008-Present); Scientific Program Committee Member, International Academy of Astronautics, Small Satellites for Earth Observation Symposium (2009-Present); Advisory Board Member, Electrical and Computer Engineering Department, Utah State University (2009-Present); Senior Member, International Academy of Astronautics, (2001-Present); Committee Member, AIAA Small Satellite Technical Committee (2015-Present); Council of Institutions Member, Universities Space Research Association (2009-2014); Committee Member, AIAA Space Systems Technical Committee Member (2002-2005).

**Dr. James S. Peery**
**Sandia National Laboratories**

**EDUCATION**

Texas A&M University
- Ph.D., Nuclear Engineering, 1990
- M.S, Nuclear Engineering, 1986
- B.S, Nuclear Engineering, 1984

**WORK EXPERIENCE**

Sandia National Laboratories
- Vice President, Defense Systems & Assessments, 2015-Present
- Director, Information Systems & Analysis, 2010-2015
- Director, Computing, Computation, Information & Math, 2007-2010
- Manager, Computational Solid Mechanics & Structural Dynamics Department, 1999-2002
- Manager, Computational Physics Research & Development Department, 1996–1999
- Senior Member Technical Staff, Computational Physics Research & Development Department, 1990-1996

Los Alamos National Laboratory
- Division Leader, Hydrodynamic Experiments, 2006-2007
- Principal Deputy Associate Director, Nuclear Weapons Program, 2004-2006
- Deputy Associate Director, Theoretical & Computational Program, 2002-2004

**AREAS OF EXPERTISE**

Radiation Hydrodynamics, Shock Physics, Computational Sciences, High Performance Computing, Nuclear Weapons, Cyber.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

American Physical Society; Texas A&M Nuclear Engineering External Steering Committee.

**Mr. Daryl G. Pelc**
**The Boeing Company**

**EDUCATION**

Pepperdine University
M.B.A., Business 1994
University of Illinois, Urbana-Champaign
B.S., Electrical Engineering, 1983

**WORK EXPERIENCE**

The Boeing Company
Vice President, Engineering & Product Support, Global Services & Support, Boeing Defense, Space & Security, 2014-Present
Vice President, Engineering & Technology, Phantom Works, Boeing Defense, Space & Security, 2007-2014
Chief Engineer, Global Mobility Systems, Boeing Defense, Space & Security, 2006-2007
Chief Engineer, Command, Control, Communication (C3) Networks, Boeing Defense, Space & Security, 2004-2006
Chief Engineer, C-130 Avionics Modernization Program, Boeing Defense, Space & Security, 2001-2004
Director, C-17 Globemaster III Avionics / Flight Controls / Support Equipment Integrated Production Team, Boeing Defense, Space & Security, 1990-2001

**AREAS OF EXPERTISE**

Engineering; Technology; Workforce Development; Leadership.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Associate Tech Fellow- American Institute of Aeronautics and Astronautics, 2014-present; Board of Directors - MIND Research Institute, Irvine, CA , 2011-present; Board of Directors - Operation Jump Start, 2007-present; Board of Directors - Boeing North America Fitness, Inc. 2012-2014; Boeing Executive Focal - University of California, Irvine, 2010-present; Engineering Leadership Council - Henry Samueli School of Engineering, UCI, 2010-present; Dean's Leadership Council - Donald Bren School of Information & Computer Sciences, UCI, 2012- present; Dean's Advisory Board - Paul Merage School of Business, UCI, 2009-present; Leadership Council - Beall Center for Art and Technology, UCI, 2008 -2014, Chair 2013-2014; Dean's Advisory Council - California State University - Long Beach School of Engineering, 2010-present; Advisory Member, Panelist and Innovation Judge- Aviation Week & Space Technology Executive Roundtables, 2010-present.

**Dr. Alan J. Pue**
**The Johns Hopkins Applied Physics Laboratory**

**EDUCATION**

University of Maryland
Ph.D., Electrical Engineering, 1981
Cornell University
M.Eng., Electrical Engineering, 1974
Cornell University
B.S., Electrical Engineering, 1973

**WORK EXPERIENCE**

John Hopkins Applied Physics Laboratory
Sector Chief Scientist, Air and Missile Defense Sector, 2010-Present
Director, Interceptor Knowledge Center, Missile Defense Agency, 2008-2010
Supervisor, Guidance Navigation and Control Group, Air and Missile Defense Department, 2000-2008
Assistant Supervisor, Guidance and Navigation Group, Power Projection Department, 1996-2000
Assistant Supervisor, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1994-1996
Section Supervisor, Navigation System Analysis Section, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1987-1994
Assistant Section Supervisor, Inertial and Pointing Systems Section, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1981-1987
Staff Member, Dynamics Analysis, Fleet Systems Department, 1974-1981

**AREAS OF EXPERTISE**

System Engineering; Weapon System Concept Development; Requirements Development; Missile Flight Test and Evaluation; Weapon System Performance Analysis; Guidance, Navigation, and Control System Design and Analysis.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

AIAA.

**Mr. Stephen B. Rejto**
**MIT Lincoln Laboratory**

**EDUCATION**
McGill University, Montreal, Canada
B.S., Mathematics and Computer Science, 1986

**WORK EXPERIENCE**
MIT Lincoln Laboratory
Cyber Security and Information Sciences Division
Division Head, 2013- Present
Communication Systems and Cyber Security Division
Assistant Division Head, 2007-2013
Reagan Test Site, Kwajalein
Director, 2004-2007
Air and Missile Defense Division
Group leadership and technical staff, 1990-2004
Space Surveillance Division
Associate/Assistant technical staff, 1986-1990

**AREAS OF EXPERTISE**
Cyber Security; Software; Open systems; Real time systems; Signal and data processing; Communications; Sensors; Missile Defense; Space Control; Electronic Warfare.

**Dr. Charles M. Rhoads**
**Raytheon Company**

**EDUCATION**

The Ohio State University
- Ph.D., Electrical Engineering, June 1983
- M.S., Electromagnetics and Antennas, August 1978
- B.S., Electrical Engineering, June 1976

**WORK EXPERIENCE**

Raytheon Company / Space and Airborne Systems
- Technology Area Director for RF; Space and Airborne Systems (SAS), 2007–Present
- Principal Engineering Fellow, SAS, 2001–Present
- Hardware Systems Engineering Department Manager, SAS Advanced Products Center (APC),2005–2007
- RF Hardware Product Engineering Department Manager, SAS/APC, 2003–2005
- Senior Technologist and Member of the Antenna/Non-metallics Department Leadership Team, SAS/APC, 2000–2003
- Engineer, various levels of progressing responsibility, Antenna/Non-metallics Department, 1997–2000

Texas Instruments / Defense Systems and Electronics Group (TI/DSEG)
- Engineer, Antenna/Non-metallics Department, 1983–1997

The Ohio State University
- Graduate Research Associate, Electro-Science Laboratory, 1976–1983

**AREAS OF EXPERTISE**

Electromagnetics and Signatures; Antennas; Active Electronically Steered Arrays (AESAs); RF Sensors; Electronic Warfare; Electronics; Materials.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Fellow, Institute of Electrical and Electronics Engineers (IEEE); Antennas and Propagation Society, and also the Microwave Theory and Techniques Society Member 1976- present; Professional Engineer (PE), State of Texas, ~2000-present.

**Dr. Kevin Saeger**
**Los Alamos National Laboratory**

**EDUCATION**

Massachusetts Institute of Technology
Ph.D., Aeronautics and Astronautics, 1989
Massachusetts Institute of Technology
M.S., Aeronautics and Astronautics, 1986
Tri-State University
B.S., Aerospace Engineering, 1984

**WORK EXPERIENCE**

Los Alamos National Laboratory
Division Leader, Intelligence and Space Research, 2010-Present
Group Leader, Decision Applications Division, 2005-2010
Various, Decision Applications Division, 2001-2005
Office of the Secretary of Defense/Program Analysis and Evaluation
Director (SES), Planning and Analytical Support, 1997-2001
Director (GS-15), Simulation and Analysis Center, 1996-1997
Analyst, Land Forces Division, 1995-1996
Institute for Defense Analyses
Staff Member, System Evaluation Division, 1989-1996

**AREAS OF EXPERTISE**

Space Systems; Survivability; Remote Sensing; Modeling and Simulation; Weapons Effects; Structural Mechanics; Materials; C4ISR; Optimization; Nuclear Detection; Operations Research; Systems Analysis; Space Situational Awareness.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Associate Editor, Military Operations Research Journal.

**Dr. Nils R. Sandell Jr.**
**Independent Consultant**

**EDUCATION**

Massachusetts Institute of Technology
Ph.D., Electrical Engineering, 1974
Massachusetts Institute of Technology
M.S., Electrical Engineering, 1971
University of Minnesota
B.S., Electrical Engineering, 1970

**WORK EXPERIENCE**

Independent Consultant
2016-Present
Defense Advanced Research Projects Agency
Director, Strategic Technologies Office, 2013-2016
Independent Consultant
2010-2013
BAE Systems
Vice President, Advanced Information Technologies, 2004-2010
ALPHATECH INC.
President and CEO, 1979-2004
Massachusetts Institute of Technology
Associate Professor, Electrical Engineering and Computer Science, 1976-1979
Assistant Professor, Electrical Engineering and Computer Science, 1974-1976

**AREAS OF EXPERTISE**

Command and Control; Communications; Guidance, Navigation & Control; Information Fusion and Management; ISR, Tracking and ID; Low Observables; Modeling, Simulation and Analysis; S&T Management; Systems Engineering.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Eta Kapa Nu; Tau Beta Pi.

**Dr. Lara S. Schmidt**
**RAND Corporation**
**S&T Reviews Vice Chair**

**EDUCATION**

The American University
Ph.D., Mathematical Statistics, 2001
West Virginia University
M.S., Mathematics, 1993
Shepherd College
B.S., Mathematics, 1991

**WORK EXPERIENCE**

RAND
Director, RAND Homeland Security Operational Analysis Center FFRDC, Strategy, Policy and Operations Program, 2016-Present
Associate Director, RAND Project AIR FORCE FFRDC, 2011-2016
Associate Director, Force Modernization and Employment, 2010-2011
Senior Statistician, 2003-Present
U.S. Naval Observatory
Mathematician, 1995-2003

**AREAS OF EXPERTISE**

Policy and technology analysis to include the following areas: offensive and defensive cyberspace operations; risk analysis; operational employment of technology and effects on warfighting operations; methodological approaches to policy analysis; cyber-manpower analyses; space and satellite systems; atomic timekeeping; GPS and navigation; cybersecurity of industrial control systems; cyber effects estimation; quality assurance; weapon system acquisition; requirements analysis; cyber testing; cybersecurity practices; cyber operations planning.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Member, American Statistical Association; Affiliated Faculty Member, Pardee RAND Graduate School.

**Dr. Gregory Shannon**
**Carnegie Mellon University**

**EDUCATION**

Harvard University
Certificate, National International Security Policy for Senior Executives 2012
Purdue University
Ph.D., Computer Sciences, Purdue University, 1988
Iowa State University
B.S, Computer Science, Iowa State University, 1982

**WORK EXPERIENCE**

Carnegie Mellon University
Chief Scientist, CERT Division, 2010-Present
Science Applications International Corp. (SAIC)
Chief Scientist, Cyber Security, Science Engineering and Technology Corporation, 2008-2010
CounterStorm, Inc.,
Chief Scientist, New York, NY, 2003-2008
Lucent Technologies, Inc.
Manager, Technology and Business Strategist, Columbus, OH, 1997-2003
Spanning Tree Technologies, Inc.
Founder and Chief Scientist, Ames, IA, 1994-1997
Indiana University
Assistant Professor, Bloomington, IN, 1997-2003

**AREAS OF EXPERTISE**

Cybersecurity, resilience, artificial intelligence, software, and science of security.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

IEEE, Senior Member; Association of Computing Machinery, Member; Women in Cyber Security (WiCyS) Conference, Steering Committee Member.

**Mr. Gregory Simer**
**Northrop Grumman Mission Systems**

**EDUCATION**

Johns Hopkins University
M.S., Electro-Optical Engineering, 2001
Virginia Tech
B.S., Electrical Engineering, 1999

**WORK EXPERIENCE**

Northrop Grumman
Director, Air Dominance, 2017-Present
Director, Advanced EO/IR Systems, 2014-2017
Program Manager, EO/IR & Distributed Systems, 2007-2014
Senior Systems Engineer, 2003-2007
Independent Consultant 2002-2004
University of Maryland
Research Scientist, Army Research Lab, 2003
Yafo Networks
Systems Engineer, 2000-2002
Gould Fiber Optics
Engineer, 1995-2000

**AREAS OF EXPERTISE**

EO/IR Systems; Infrared Search and Track, Laser Radar; Fiber Optics; Lasers; Focal Plane Arrays, Optical Windows; Airborne System Integration; Flight Test; Low Observable Technologies; Radar, Optical Communication systems; ISR; Fire-control; Tracking and ID.

**Mr. Moise N. Solomon**
**MITRE Corporation**

**EDUCATION**

Massachusetts Institute of Technology
S.M.SDM, Engineering and Management, 2002
Northeastern University
M.S.E.E. Fields, Waves, and Optics/EE, 1992
University of Massachusetts - Amherst
B.S.E.E., Microwave and Communications Systems/EE, 1988

**WORK EXPERIENCE**

The MITRE Corporation
Technical Director, Electronic Systems and Enabling Technologies, 2016-Present
Technical Director, Network Centric Infrastructure, 2013-2016
Associate Executive Director, Network Centric Infrastructure, 2010-Present
Department Head Airborne Networking, Network Centric Division, 2006-2010
Section Leader ISR, Project Leadership and Integration Division, 2003-2006
Section Leader Advanced Wireless Electronics, Enabling Technologies Technical Center, 2000-2003
Associate Section Leader Microwaves and Optics, Enabling Technologies Technical Center, 1997-2000
Member of Technical Staff, Microelectronics Technical Center, 1988-1997
Air Force
Member, AF Scientific Advisory Board, 2014-Present
Consultant, AF Scientific Advisory Board, ANCCE Study, 2013
General Dynamics, Electric Boat
Engineer Trainee, Power Systems Division, 1985-1987

**AREAS OF EXPERTISE**

Communications Systems; Tactical Datalinks; Systems Engineering; Radio Frequency and Analog Circuit Design; ISR Systems; Rapid Prototyping; Technology Integration and Transition; Technical Strategy; Analysis; Leadership; Management; Acquisition.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Institute of Electrical and Electronic Engineers (IEEE), Senior Member.

**Dr. Allan G. Sonsteby**
**Penn State University**

**EDUCATION**

Penn State University
- Ph.D., Electrical Engineering, 1996
- M.S., Electrical Engineering, 1989
- B.S., Electrical Engineering, 1987

**WORK EXPERIENCE**

Penn State University
- Deputy Executive Director, Defense Related Research Units, 2014-Present
- Associate Director, Applied Research Laboratory, 2002-2014

United States Navy (as an IPA)
- Chief Scientist, Naval Information Warfare Activity, 2001-2002

Penn State University
- Research Staff, Applied Research Laboratory, 1994-2001

E-Systems, Inc.
- Research Staff, Intelligence and Information Systems, 1992-1994

Southwest Research Institute
- Research Staff, Radiolocation Sciences, 1989-1992

**AREAS OF EXPERTISE**

Cyber Defense/Offense; Electronic Warfare, RF Sensors; Communications; Signal and Data Processing.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Institute of Electrical and Electronics Engineers (IEEE); National Defense Industrial Association (NDIA); Intelligence and National Security Alliance (INSA).

**Dr. Lindley Specht**
**Raytheon**

**EDUCATION**

University of Illinois at Urbana-Champaign
Ph.D., Electrical Engineering, 1981
University of Illinois at Urbana-Champaign
M.S., Electrical Engineering, 1978
University of Florida
B.S., Chemistry, 1974

**WORK EXPERIENCE**

Raytheon
Subject Matter Expert, RayTech, 2015-Present
Retiree, Integrated Defense Systems, 2014-2015
Senior Principal Engineering Fellow, Integrated Defense Systems, 2009-2014
Principal Engineering Fellow, Integrated Defense Systems, 2006-2009
Senior Engineering Fellow, Integrated Defense Systems, 2003-2006
Engineering Fellow, Raytheon Electronic Systems, 1999-2003
Manager/Lead Scientist, Raytheon Systems Company, 1998-1999
Manager/Principal Engineer, Raytheon Electronic Systems, 1995-1998
Manager/Principal Scientist, Corporate Research Division, 1989-1995
Senior Scientist, Corporate Research Division, 1981-1989

**AREAS OF EXPERTISE**

Electro-Optics; Infrared Focal Plane Arrays; Lasers including HEL/DEW; Advanced Materials and Material/Chemical Science; MEMS, Nanotechnology; RF Devices, Semiconductor Materials and Device Fabrication; IC Design; Computer Systems; Signature Management; Sensor Systems; System Design and Analysis; Emerging Technology Development; Commercial Technology Applications.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

IEEE; ACS; ARRL.

**Dr. Patrick A. Stadter**
**The Johns Hopkins Applied Physics Laboratory**

**EDUCATION**

The Pennsylvania State University
Ph.D., Electrical Engineering, 1997
The Johns Hopkins University
M.S., Electrical Engineering, 1993
The University of Notre Dame
B.S., Electrical Engineering, 1991

**WORK EXPERIENCE**

Johns Hopkins University/Applied Physics Laboratory
Chief of Research, Development, and Engineering/Program Manager, National Security Space Mission Area, 2008-Present
Military and Intelligence Systems Section Supervisor/ Space Systems Applications Assistant Group Supervisor, Space Exploration Sector, 1997-2008
Associate Staff/Temporary On-call, Space Systems Applications Group, 1989-1997

**AREAS OF EXPERTISE**

Space systems engineering; space control; space security and defense; autonomous systems; communication and radio frequency systems; navigation and timing systems; information theory; data and information fusion; distributed system analysis and control; satellite communications; space situational awareness; missile warning; missile defense.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

National Academies of Sciences: National Research Council Division on Engineering and Physical Sciences, appointment to review committee of the NASA Space Communications Program (2005-2007); Institute of Electrical and Electronics Engineers (IEEE), 1991- present; Session Chair, IEEE Aerospace Conference , 2006-2014; American Institute of Aeronautics and Astronautics (AIAA); Tau Beta Pi Engineering Honor Society, 1991-present; Eta Kappa Nu Electrical and Computer Engineering Honor Society, 1991-present);The Honor Society of Phi Kappa Phi, 1991-present.

**Dr. Vyshnavi Suntharalingam**
**MIT Lincoln Laboratory**

**EDUCATION**

Pennsylvania State University
Ph.D., Engineering Science and Mechanics, 1996
Yale University
B.S., Electrical Engineering, 1989

**WORK EXPERIENCE**

MIT Lincoln Laboratory
Senior Staff, Space Systems & Technology, 2014-Present
Group Leader, Advanced Imaging and Silicon Technology, 2010-2014
Senior Staff, Advanced Imaging Technology, 2005-2010
Assistant Group Leader, Advanced Silicon Technology, 2000-2005
Technical Staff, Advanced Technology, 1996-2000

**AREAS OF EXPERTISE**

EO/IR components, sensors, systems; advanced materials and materials science; microelectronics; satellites and space system technologies; manufacturing technologies; RF components and sensors.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

IEEE Senior Member; DOE Basic Energy Sciences Accelerator and Detector Research Program Reviewer; DOE Basic Energy Sciences SLAC Linac Coherent Light Source Detector Advisory Committee; Manuscript reviewer: IEEE Electron Device Society, Journal of Astronomical Telescopes, Instruments, and Systems; Technical Program Committee member: IEEE International Electron Devices Meeting, Scientific Detectors for Astronomy Workshop (2012 to present),, International Congress on High-Speed Imaging and Photonics, International Image Sensor Workshop (2012 to present), IEEE SOI-3D-Subthreshold Microelectronics Technology (2012-2016), IEEE SOI Conference Short Course Chair (2008); Lincoln Laboratory Technical Excellence Award 2014; MIT Excellence Award, Fostering Diversity and Inclusion 2010; Lincoln Laboratory Team awards: 2016-2017, 2015-2016, 2011-2012, 2004-2005.

**Dr. Steve Warner**
**Institute for Defense Analyses**

**EDUCATION**

Massachusetts Institute of Technology
Ph.D., Inorganic Chemistry, 1986
State University of New York, Stony Brook
B.S., Chemistry/Minor Mathematics, 1982

**WORK EXPERIENCE**

Institute for Defense Analyses
Director, System Evaluation Division, 2008-Present
Assistant Director, System Evaluation Division, 2005-2008
Research Staff Member, Operational Evaluation Division, 1986-2005
Massachusetts Institute of Technology
Research and Teaching Assistant, Chemistry Department, 1982-1986

**AREAS OF EXPERTISE**

Assessments of Weapon System Performance (missiles, sensors, torpedoes, countermeasures); Mission- and Force-Level Modeling and Simulation; Test and Evaluation of Military Systems; Evaluation of Tools for Predicting Atmospheric Transport and Dispersion (chemical-biological agent defense, nuclear effects, hazardous materials), Electronic Warfare (counter-improved explosive device and air warfare); Evaluation of Undersea and Antisubmarine Systems; Operational Assessment of Counterdrug Operations and Coast Guard Law Enforcement Activities.

**Mr. Alan Wiechman**
**Eagle Aerie Inc/Partner**

**EDUCATION**
California Polytechnic State University
B.S., Electrical Engineering, 1972

**WORK EXPERIENCE**
Eagle Aerie Inc.
Chief Technology Officer, 2014-Present
Boeing
Vice President Special Technology Integration, 2009-2014
Vice President Advance Combat Systems, 2004-2006
Division Director, Special Assignment, 2000-2004
Director Proprietary Professional Grounds Managements, 1985-2000
Deposition Technology, Brunswick, 1985-1985
LO Section Chief, McDonnell Douglas 1981-1985
LO Engineer, Lockheed Skunks Works 1977-1981
Electronic Engineer, Vitro Labs, Naval Upgrades 1971-1977

**AREAS OF EXPERTISE**
Low Observables, Radar Cross Section/ Radiant Intensity/ Acoustics/ Visual/ Electromagnetic Emissions, Prop, Aero, Materials, Mission Systems, Structures, Codes.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**
AIAA, Aerospace Design Award; National Defense Industrial Association Combat Survivability Award, Tech Achievement; Pioneer of Stealth Award; Engineering Advisory Board to ISU.

**Dr. Marvin F. Young**
**Aerojet Rocketdyne**

**EDUCATION**

University of California, Davis
Ph.D., Mechanical Engineering, 1979
Stanford University
Engineer, Mechanical Engineering, 1976
Purdue University
M.S., Mechanical Engineering, 1973

**WORK EXPERIENCE**

Aerojet Rocketdyne
Vice President, Engineering, 2013-Present
Vice President, Engineering, 1999-2013
Director, Mechanical Engineering, 1995-1999
Program Director, Space Systems, 1988-1995
Manager, Thermal Systems Engineering, 1985-1988
University of California, Irvine
Assistant Professor, Mechanical Engineering, 1980-1985
Acurex Corporation
Staff Engineer, Engineering, 1975-1977

**AREAS OF EXPERTISE**

Mixed Convection Heat Transfer; Thermodynamics; Turbulence Modeling; and Rocket Propulsion Applications.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Outstanding Mechanical Engineer (Purdue University); Who's who in Technology (Thermal Sciences); Engineering Professor of the Year (University of California, Irvine); Western Region Engineering Professor Award; Member of AIAA, ASME, and California Professional Engineers.

**Dr. Yadunath B. Zambre**
**Lockheed Martin**

**EDUCATION**

Stanford University
Ph.D., Applied Physics, 1987
Yale University
M.S., Engineering and Applied Science, 1979
Yale University
B.S., Engineering and Applied Science, 1979

**WORK EXPERIENCE**

Lockheed Martin
Chief Scientist, Space Systems, Advanced Technology Center, 2012-Present
Chief Scientist, Information Systems and Global Services, Defense Engineering, 2009-2012
Senior Fellow, 2011-Present
Fellow, Information Systems and Global Services, 2008-2011
Principal Engineer, Information Systems and Global Services, 2005-2008
UTrue, Inc.
Chief Technology Officer, 2003-2005
R.B. Webber & Company
Principal, 2002-2003
Atomic Tangerine
Chief Technology Officer, 2000-2002
Stanford Research Institute
Principal Consultant, SRI Consulting, 1997-2000
Research Physicist, Geoscience and Engineering Center, 1989-1997

**AREAS OF EXPERTISE**

Cyber security; communications; networking; systems architecture; space systems; business models; technology incubation; technology commercialization.

**PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS**

Member, IEEE.

# Section 2: Air Staff and Secretariat Biographies

**Lt Gen Arnold W. Bunch, Jr.**
**SAB Military Director**

Lt Gen Arnold W. Bunch, Jr., is the Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. He is responsible for research and development, test, production, and modernization of Air Force programs worth more than $32 billion annually.

General Bunch was commissioned in 1984 as a graduate of the U.S. Air Force Academy. He completed undergraduate pilot training in 1985. He completed operational assignments as an instructor, evaluator and aircraft commander for B-52 Stratofortresses. Following graduation from the Air Force Test Pilot School, General Bunch conducted developmental testing in the B-2 Spirit and B-52 and served as an instructor in each. Additionally, he has commanded at the squadron, group and wing levels. Prior to his current assignment, he was the Commander of the Air Force Test Center, headquartered at Edwards Air Force Base, California.

**EDUCATION**
1984 Bachelor of Science degree in civil engineering, U.S. Air Force Academy
1991 Squadron Officer School, Maxwell AFB, Ala.
1994 Master of Science degree in mechanical engineering, California State University Fresno
1996 Army Command and General Staff College, Fort Leavenworth, Kan.
2000 Master of Science degree in national security strategy, National War College

**ASSIGNMENTS**
1. July 1984 - July 1985, Student, undergraduate pilot training, Columbus Air Force Base, Miss.
2. August 1985 - December 1985, Student, B-52 Combat Crew Training School, Castle AFB, Calif.
3. January 1986 - June 1990, Standardization and Evaluation Instructor Aircraft Commander, 325th Bomb Squadron, Fairchild AFB, Wash.
4. July 1990 - June 1991, Student, USAF Test Pilot School, Edwards AFB, Calif.
5. July 1991 - June 1992, Test Pilot, 6512th Test Squadron, Edwards AFB, Calif.
6. July 1992 - June 1995, Test Pilot, 420th Test Squadron, Edwards AFB, Calif.
7. June 1995 - June 1996, Student, Army Command and General Staff College, Fort Leavenworth, Kan.
8. July 1996 - July 1999, Chief, B-1 Test and Evaluation, B-1 System Program Office, Wright-Patterson AFB, Ohio
9. August 1999 - June 2000, Student, National War College, Fort Lesley J. McNair, Washington, D.C.
10. June 2000 - July 2002, Commander, 419th Flight Test Squadron, Edwards AFB, Calif.
11. August 2002 - April 2003, Chief, Senior Officer Management, Air Force Materiel Command, Wright-Patterson AFB, Ohio
12. April 2003 - June 2004, Deputy Chief, Combat Forces Division, the Pentagon, Washington, D.C.
13. June 2004 - January 2006, Director, Munitions Directorate, Air Force Research Laboratory, Eglin AFB, Fla.
14. January 2006 - May 2008, Commander, 412th Test Wing, Edwards AFB, Calif.
15. June 2008 - March 2010, Vice Commander, Air Armament Center, Eglin AFB, Fla.
16. March 2010 - June 2011, Director and Program Executive Officer for the Fighters and Bombers Directorate, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
17. June 2011 - June 2012, Commander, Air Force Security Assistance Center, AFMC, Wright-Patterson AFB, Ohio
18. June 2012 - June 2015, Commander, Air Force Test Center, Edwards AFB, Calif.
19. June 2015 - present, Military Deputy, Office of the Assistant Secretary of the Air Force (Acquisition)

**FLIGHT INFORMATION**
Rating: command pilot
Flight hours: more than 2,500 hours
Aircraft flown: B-52, B-2, KC-135, F-16, T-38 and others

**MAJOR AWARDS AND DECORATIONS**
Legion of Merit with two oak leaf clusters
Meritorious Service Medal with five oak leaf clusters
Distinguished Service Medal
Aerial Achievement Medal with oak leaf cluster
Air Force Commendation Medal
Air Force Achievement Medal
Combat Readiness Medal
National Defense Service Medal with oak leaf cluster
Global War on Terrorism Service Medal

**EFFECTIVE DATES OF PROMOTION**
Second Lieutenant May 30, 1984
First Lieutenant May 30, 1986
Captain May 30, 1988
Major Dec. 1, 1995
Lieutenant Colonel Sept. 1, 1998
Colonel June 1, 2004
Brigadier General May 7, 2010
Major General Aug. 23, 2013
Lieutenant General June 24, 2015

(Current as of June 2015)

**Dr. Richard J. Joseph**
**Air Force Chief Scientist**
**Ex-Officio Member**

Dr. Richard J. Joseph is the Chief Scientist of the United States Air Force, Washington, D.C. He serves as the chief scientific adviser to the Chief of Staff and Secretary of the Air Force, and provides assessments on a wide range of scientific and technical issues affecting the Air Force mission. In this role, he identifies and analyzes technical issues and brings them to the attention of Air Force leaders, and interacts with other Air Staff principals, operational commanders, combatant commands, acquisition and science and technology communities to address cross-organizational technical issues and solutions. He also interacts with other services and the Office of the Secretary of Defense on issues affecting the Air Force technical enterprise. He serves on the Executive Committee of the Air Force Scientific Advisory Board. He is the principal science and technology representative of the Air Force to the civilian scientific and engineering community and to the public at large.

Dr. Joseph has more than 40 years of experience as a physicist, directed energy researcher, senior program manager, national security advisor and executive. Prior to assuming his current position, Dr. Joseph was the Chief Executive Officer for Earthstar LLC, a small consulting firm he founded in 1998. In this position, he has served government agencies, national laboratories and public companies on the development and management of programs in a broad range of technical areas.

Dr. Joseph commissioned into the United States Air Force in 1973. While on active duty, he performed nuclear physics research at the Defense Nuclear Agency, taught basic and upper level physics courses at the United States Air Force Academy, and in 1983 served on the Directed Energy Panel of the Defensive Technologies Study Team. The resulting DTST Presidential study report became the blueprint for the Strategic Defense Initiative.

Upon leaving active duty, Dr. Joseph joined Los Alamos National Laboratory in the Accelerator Technology group. In 1985 he was chosen as the Neutral Particle Beam program manager in the Strategic Defense Initiative Office's Directed Energy Office. While in this role he instituted and directed three major spacecraft-based programs.

In 1987 he divided his time between serving as a senior advisor to the Defense and Space Delegation in the Nuclear and Space Talks with the Soviet Union in Geneva, acting as a senior policy analyst for national security at the White House Office of Science and Technology Policy, and directing a large study on deployment of an initial missile defense capability for the Secretary of Defense.

Between 1988 and 1990 Dr. Joseph led multiple research programs in laser remote sensing to include an airborne laser system capable of detecting biological warfare agents at LANL. This system, designed to support Operation Desert Storm, was built and successfully tested in 28 days.

In 1992 Dr. Joseph took a leave of absence to join the National Aeronautics and Space Administration where he was part of a small group of senior managers directing the restructuring of the agency. While at NASA he also led an interagency task force on remote sensing that moved the agency from using very large satellites for the Earth Observing System to constellations of smaller platforms.

Upon returning to Los Alamos in 1993, he directed the Laboratory's missile defense programs and in 1995 he joined the Accelerator Production of Tritium program which intended to use a

new approach in a new production plant to produce material for the nuclear weapons program.

**EDUCATION**
1970 Bachelor of Science Physics, Georgetown University, Washington D.C.
1979 Ph.D. Physics, University of Texas, Austin

**CAREER CHRONOLOGY**
1973 – 1979, Nuclear researcher, Defense Nuclear Agency, Armed Forces Radiobiology Research Laboratory
1979 – 1981, Physics instructor, United States Air Force Academy, Colorado Springs, Colo.
1981 – 1983, Field Command Defense Nuclear Agency nuclear weapons development liaison officer, Los Alamos National Laboratory, N.M.
1983 – 1985, Program manager, Neutral Particle Beam program, SDIO Directed Energy Office
1986 – 1987, Director, Missile Defense Study, Office of the Secretary of Defense, the Pentagon, Washington, D.C.
1988 – 1992, Laser Remote Sensing program manager, LANL, N.M.
1992 – 1993, Integration Team Lead, National Aeronautics and Space Administration, Washington D.C.
1993 – 1995, Missile Defense Program Director, LANL, N.M.
1995 – 1998, Accelerator Production of Tritium program, Department of Energy, LANL, N.M.
1998 – 2017, Owner, Earthstar LLC, LANL, N.M.
2018 – present, Chief Scientist of the U.S. Air Force, Washington, D.C.

**BOARDS AND ADVISORY GROUPS (Recent)**
Oak Ridge National Laboratory, Global Security Advisory Group
Oak Ridge National Laboratory, Nuclear Science and Engineering Advisory Board
Argonne National Laboratory, Global Security Advisory Group
Nevada Test Site, Senior Advisory Group

(Current as of February 2018)

**Lt Col Domenic Smeraglia**
**Executive Director**

Lieutenant Colonel Smeraglia is the Executive Director, Air Force Scientific Advisory Board, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. He is responsible for the 20-person Secretariat at Headquarters Air Force, which supports over 50 leading scientists and engineers from industry, FFRDCs, national labs, and academia who perform in-depth reviews of Air Force science and technology programs and conduct major studies on topics deemed critical by the Air Force. Prior to his current assignment, Lieutenant Colonel Smeraglia was assigned to National Reconnaissance Office where he served as a Materiel Leader for the Radar Systems Program Office.

His first assignment was as a Systems Engineer for the Global Air Traffic Management program at Hanscom AFB, MA. Next, he was selected to attend the University of Michigan through AFIT-CI, where he earned a Master's Degree in electrical engineering. He was then assigned to the National Reconnaissance Office, Chantilly VA, where we served as a payload engineer and Deputy Director, Director's Action Group, IMINT Directorate. Next, he was assigned as a program manager at the Air Force Rapid Capabilities Office, Bolling AFB, DC where he managed several highly-classified efforts. He was then selected to attend IDE in-residence at Air Command and Staff College, Maxwell AFB, AL. Following ACSC, Lt Col Smeraglia was assigned to USSOCOM where he served as the Program Manager for Global Video Surveillance and was the Executive Officer to the USSOCOM Acquisition Executive. Lt Col Smeraglia is married and has four children.

**EDUCATION**
1998 Bachelor of Science degree in electrical engineering, U.S. Military Academy, West Point, NY.
2001 Master of Science degree in electrical engineering, University of Michigan, Ann Arbor, MI.
2005 Squadron Officer School, in residence
2011 Master's degree in Military Operational Art and Science, Air Command and Staff College, Maxwell AFB, Ala.
2017 Graduate, Program Manager's Course (PMT-401), Defense Acquisition University

**ASSIGNMENTS**
1. July 1998 – August 2000, Avionics Systems Engineer, Global Air Traffic Operations/Mobility Command and Control
2. Sep 2000 - Dec 2001, Graduate student, University of Michigan, Ann Arbor, MI
3. Jan 2002 – May 2002, Engineering with Industry, Veridian Corporation, Ann Arbor, MI
4 Jun 2002 – May 2005, Future Imagery Architecture Satellite Payload Engineer, National Reconnaissance Office, Chantilly VA
5. May 2005 – May 2006, Program Element Monitor for National Imagery Systems, IMINT Directorate, National Reconnaissance Office, Chantilly, VA
6. Jun 2006 – Jun 2008, Chief, Offensive Systems Branch, Air Force Rapid Capabilities Office, Bolling AFB, DC
7. Jun 2008 – Jun 2010, Joint System Program Manager, Air Force Rapid Capabilities Office, Bolling AFB, DC
8. Jul 2010 – Jun 2011, Student, Air Command and Staff College, Maxwell AFB, AL
9. Jun 2011 – Feb 2012, Director, Manned ISR Systems, PEO-Fixed Wing, USSOCOM, MacDill AFB, FL
10. Feb 2012 - Feb 2013, Executive Officer to the USSOCOM Acquisition Executive, Special Operations Research, Development, & Acquisition Center, USSOCOM, MacDill AFB, FL
11. Feb 2013 – Jun 2014, Program Manager, Global Video Surveillance Activities, PEO-SOF Warrior, USSOCOM, MacDill AFB, FL

12. Jun 2014 – Jun 2017, Materiel Leader, Radar Payloads Program Manager, Radar Systems Program Office, National Reconnaissance Office, Chantilly, VA
13. July 2017 – present, Executive Director, Air Force Scientific Advisory Board, the Pentagon, Washington, DC

**SUMMARY OF JOINT ASSIGNMENTS**
Jun 2011 - Jun 2014, Special Operations Research, Development & Acquisition Center, USSOCOM, FL

**MAJOR AWARDS AND DECORATIONS**
Defense Meritorious Service Medal w/ 3 oak leaf clusters
Air Force Commendation Medal
Joint Service Achievement Medal

**OTHER ACHIEVEMENTS**
1999 Junior Engineer of the Year, Air Force Materiel Command
2017 NRO Silver Medal

**EFFECTIVE DATES OF PROMOTION**
Second Lieutenant May 27, 1998
First Lieutenant May 27, 2000
Captain May 27, 2002
Major Jan. 1, 2008
Lieutenant Colonel May. 1, 2013

(Current as of September 2017)

**Mr. Evan G. Buschmann**
**Deputy Executive Director**

**EDUCATION**
University Illinois Champaign-Urbana
B.S., General Engineering, 2005

**AREAS OF EXPERTISE**
Acquisition Program Management; Systems Engineering; Continuous Process Improvement; Aircraft Survivability and Mission Effectiveness Engineering and Test.

**ASSIGNMENTS**
USAF Life Cycle Management Center (ASC/WWJP), F-35 Joint Program Office (Arlington, VA)
F-35 Strategic Initiatives Lead, 2016-2017
F-35 Block 3i Deputy Capability Manager, 2014-2016
F-35 Deputy Program Manager for Production Planning, 2012-2014

NAVAIR/NAWCAD AIR-4.1.8 (Patuxent River Naval Air Station, MD)
F-35 Survivability and Mission Effectiveness Verification Lead, 2010-2012
F-35 RF/IR Signature Engineer, 2010
VH-71 Presidential Helicopter Survivability Engineer, 2008-2010
HX-21 Rotary Wing Flight Test Engineer, 2007-2008
AH-1W/Z and UH-1N/Y Aircraft Survivability Engineer, 2005-2007

**Lt Col Michael J. Rigoni**
**Chief of SAB Studies**

**EDUCATION**
University of Miami
M.A., International Affairs
Air Command and Staff College (in-residence)
M.A., Military Operational Art and Science
Southern Illinois University
B.S., Aviation Management

**AREA OF EXPERTISE**
Acquisition Program Management and Logistics, Foreign Military Sales, Project Management, Budgeting, Geospatial Mapping, Embassy Force Protection.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Jun 13-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Maxwell AFB) Air Command & Staff College; (US SOUTHCOM) Staff Officer, J9 Partnering Directorate; (US CENTCOM) Coalition Country Desk Officer, J5 - Coalition Coordination Center; (Islamabad, Pakistan) Comptroller of Coalition Support Funds Program, U.S. Embassy; (Managua, Nicaragua) Officer in Charge of Foreign Military Sales and Force Protection, U.S. Embassy; (Hill AFB, UT) Acquisition Program Manager, A-10 Avionics, Radar & Air-to-Ground Munitions.

**Maj Jed E. Sherman**
**Chief of S&T Reviews**

**EDUCATION**
Georgetown University
M.S., Infectious Diseases
American Military University
M.A., National Security Studies
West Liberty University
B.S., Biology

**AREAS OF EXPERTISE**
Program Management; Counter WMD; Special Military Operations; Air Mobility.

**MILITARY ASSIGNMENTS**
(Pentagon, VA Sept 16-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Hurlburt Field) Formal Training Unit Instructor/Evaluator & Flight Commander U-28A; (Dyess AFB) Instructor Navigator C-130 E/H.

**MSgt Michael E. Salopek**
**Superintendent**

**EDUCATION**
Senior Non Commissioned Officer Academy, In-resident
Non Commissioned Officer Academy, In-resident
Airman Leadership School, In-resident
Community College of the Air Force
Information Resources Management
Aircraft Maintenance Technology

**AREAS OF EXPERTISE**
Client Systems; Electronic Records Management (ERM); HR Actions; Microsoft SharePoint; Information Assurance (IA) Protection; Microsoft Customer Relationship Management (CRM); Privacy Act; Personally Identifiable Information (PII).

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Oct 14-Present) Office of the Assistant Secretary of the Air Force (Acquisition); (Scott AFB, IL, Aug 07-Oct 14) Executive Services Manager, Eighteenth Air Force; Superintendent Knowledge Operations, 618th Air & Space Operations Center; NCOIC, EIM Operations, Headquarters Air Mobility Command; Command Publications & Forms Management, Headquarters Air Mobility Command; (Hill AFB, UT, Nov 03-Aug 07) Aircrew Egress Systems Craftsman 388th CMS.

**SSgt Angela R. Franks**
**Security Manager**

**EDUCATION**
Airman Leadership School, In-resident

**AREAS OF EXPERTISE**
Commanders Support Staff; Executive Support; Personnel Systems; Microsoft Applications; Information Protection; Information Security; Computer Security; Personnel Security; Physical Security; Industrial Security

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Oct 16 - Present) Office of the Assistant Secretary of the Air Force (Acquisition); (Cannon AFB, NM, Apr 11-Oct 16) Commanders Support Staff 43d Intelligence Squadron.

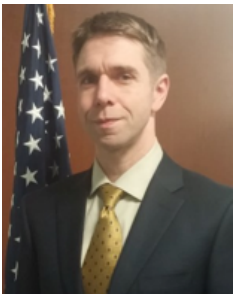
**Mr. Raymond H. McJonathan**
**Budget Officer**

**EDUCATION**
Airman Leadership School
Non Commissioned Officer Academy
Senior Non Commissioned Officer Academy

**AREAS OF EXPERTISE**
Military finance, personnel, and travel; SAF/AQB budget and fiscal integrity.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Dec 02-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Robins AFB) 78th Comptroller Squadron – AF Reserve; (Wright Patterson AFB) HQ AFMC Logistics Support Office; (Bolling AFB) 11th Wing Financial Management; (Robins AFB) Warner Robins Air Logistics Center; (Kelly AFB) San Antonio Air Logistics Center; (Dover AFB) 436th Comptroller Squadron; (Offutt AFB) 55th Comptroller Squadron.

**Mr. Nick A. Stern**
**Senior Program Analyst**



**EDUCATION**
Virginia Commonwealth University
B.A., History | Anthropology

**AREAS OF EXPERTISE**
Strategic Planning; Force Management; Program Management; Supply Chain Logistics; Budget Analysis; Database Management; Mortuary Affairs; Historical Archaeology.

**ASSIGNMENTS**
(Fort Bragg, NC, Feb 16 – Oct 17) Strategic Planner, 1st Sustainment Command (Theater); (Fort Lee, VA, Apr 14 – Feb 16) Battalion S-3 (FWD), 82nd Special Troops Battalion.

**Mr. Steven B. Chambers**
**Senior Program Analyst**

**EDUCATION**
Joint Forces Staff College Norfolk Virginia
International Relations (Student)
Command and General Staff College
PRINCE II Practitioner (PMP Equivalent)
Practitioner Certified
Army Systems Automation Management School, 2006
CISCO Academy Cert
University of Texas at San Antonio
BS Geopolitics (1986)

**AREAS OF EXPERTISE**
IT Systems Automation Management, Project Management, Command Leadership.

**MILITARY ASSIGNMENTS**
Retired US Military Officer (Army 15 years/ USMC Officer 10 years), US Army Cyber Command Capabilities and Integrations/ D-CTO - Industry Engagement Manager 2014-2016; NATO Joint Warfare Center, Stavanger Norway - Capabilities and Integration Section Chief 2011-2014; 1 Armored Division, Bagdad Iraq Assistant G-3 Current Operations, 2009-2011; NATO Joint Warfare, Stavanger Norway - Plans and Policies Section Leader 2006-2009; Army Testing and Evaluation Command, Alexandria VA - Testing and Evaluations Officer 2004-2006; 25th Infantry Division, 3rd Bde. 2-27 Infantry BN - Company Commander 2002-2004; 25th Infantry Division, 3rd Bde. 2-27 Infantry BN - Assistant G-3 1999-2002; Sterling International Group, Sterling VA - Logistics Accounts Manager 1994-1999; 11th Marine Corps Recruit District, San Francisco, CA - Operations Officer 1991-94; 1st Mar Div., 3rd Mar, Kaneohe MCAS, HI - Executive Officer/ Platoon Commander 1988-1991.

**Mrs. Adelyn C. White Eagle**
**Database Information Manager**

**EDUCATION**
Maurice J. McDonough

**AREAS OF EXPERTISE**
Database Administration; Records Management; Personnel Management; Physical Logistics Administrator; Personnel Security; Program Management; Project Team Lead Leadership; Intelligence Community; Missile Defense Community; US Army Command Headquarters Community.

**ASSIGNMENTS**
(Pentagon, VA, Sep 14-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Pentagon, VA, Mar 15- Dec 16) Washington Headquarters Services of Office of Financial Management Directorate Division and Human Resources Directorate Division Senior Executive Administrative Specialist; (Vienna, VA, Sept 2010- Nov 2011)Sherman Kent School for Intelligence, Program Administrator; (Alexandria, VA, Nov 2007- Sept 2010) US Army Human Resources Command Headquarters, Army Continuing Education Division Business System Analyst Team Lead; (Rosslyn, VA, Aug 2004- Jan 2007) Sparta Missile Defense Agency Corporate Executive Administrative.

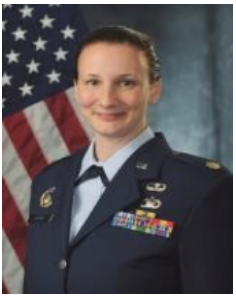
**Mr. Matthew M. Blackwelder**
**Senior Program Analyst**

**EDUCATION**
American Public University
M.A., American History, 2011
University of South Carolina
B.S., Geology, 1999

**AREAS OF EXPERTISE**
Acquisition, Project Management, Logistics, Sustainment Planning, Procurement, Budgeting, Operational Planning and Execution, Systems Engineering

**ASSIGNMENTS**
(Fort Bragg, NC, 2016-2017) U.S. Army, 1st Theater Sustainment Command, Logistics Capabilities Program Manager; (Wiesbaden, GM, 2013-2016) U.S. Army, Army Special Operations Logistics Element, Sustainment Project Manager; (Fort Meade, MD, 2010-2014) U.S. Army, Asymmetric Warfare Group, Senior Logistics Manager.

**Lt Col Jennifer L. Dahms**
**Executive Staff Officer**



**EDUCATION**
Harvard University
M.A., Extension Studies/Government
United States Air Force Academy
B.S., Legal Studies

**AREAS OF EXPERTISE**
Program Management, Intelligence Policy & Strategy, Data Exploitation & Dissemination Systems.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Mar 14-present) Office of the Assistant Secretary of the Air Force (Acquisition); (National Air and Space Intelligence Center) Program Manager for Business Analytics; (166 Network Warfare Squadron, Delaware Air National Guard) National Security Agency Threat Operations Center Analyst; (102 Network Warfare Squadron, Rhode Island Air National Guard) Flight Commander, Intelligence Support to Air Force Network Operation Center; (Hanscom Air Force Base) Program Manager, Distributed Common Ground System Block 10.2 and Air Operations Center Integration; (Hanscom AFB) Project Manager, Joint Mission Planning System.

**Maj Philip L. Haar**
**Executive Staff Officer**

**EDUCATION**
Cornell University
M.B.A., Operations
Cornell University
B.S., Computer Engineering

**AREAS OF EXPERTISE**
Supply Chain Strategy; Business Case Analysis; Defense Contract Negotiations; Supply Network Planning, Inventory Planning.

**MILITARY ASSIGNMENTS**
Pentagon, VA, May 12-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Tinker AFB, OK) E-3 AWACS Instructor Pilot; (Tinker AFB, OK) Chief of Current Operations; (Tinker AFB, OK) Flight Commander; (Kadena AB, Okinawa) Life Support Officer.

**Maj Jonathon I. Henry**
**Executive Staff Officer**

**EDUCATION**
University of Dayton
M.S., Aerospace Engineering
West Virginia University
B.S., Aerospace Engineering

**AREAS OF EXPERTISE**
Aerodynamics; Aircraft Configuration; Flight Test; Wind Tunnel Testing; Hypersonics; Powered Lift Systems; Missile Testing; Education and Training.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, May 15-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Maxwell AFB) Chief, Commanders Action Group, HQ Air University; Dir of Ops, 23d Training Sq, OTS; Student Sq CC, 23d Training Sq, OTS; (Kirtland AFB) Chief, Airborne Sensors Branch, Airborne Laser Program Office; Deputy Chief, Airborne Sensors Branch, Airborne Laser; (Camp Victory, Iraq) Ops Officer, DCMA Central Iraq; (Edwards AFB) Lead B-2 Ops Engineer, 419th Flt Test Sq, 412th Test Wing; Flight Test Engr, Hypersonic Flight Test Team, 412th Test Wing; (Wright Patt AFB) Deputy Chief, Advanced Mobility Office, Air Vehicles Dir, AFRL; Developmental Engr, Air Vehicles Dir, AFRL.

**Maj Timothy K. Pape**
**Executive Staff Officer**

**EDUCATION**
University of Massachusetts Amherst
M.B.A., Business Administration
Clarkson University
B.S., Engineering and Management

**AREAS OF EXPERTISE**
Acquisition, Program Management, ISR, Communications, GEOINT, Network Security, Coalition Operations and Test, Business Operations, Space Operations, Systems Engineering, Intelligence Community.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Jan 12-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Chantilly, VA) Ardent Gunslinger Program Manager, National Reconnaissance Office; (Chantilly, VA) Puppet Master Program Manager; National Reconnaissance Office; (Hanscom AFB) Executive Officer, 950th Electronic Systems Group; (Hanscom AFB) Network Centric Collaborative Targeting Project Officer, ISR Systems Group.

**Capt Matthew C. Renner**
**Executive Staff Officer**

**EDUCATION**
Harvard Business School
M.B.A., Business Administration, 2016
John Hopkins University
M.S., Systems Engineering, 2013
University of Michigan
B.S., Mechanical Engineering, 2010

**AREAS OF EXPERTISE**
Strategy consulting; general management; due diligence; financial analysis; engineering management; program management; mechanical engineering; systems engineering; design.

**MILITARY ASSIGNMENTS**
United States Air Force Reserve Staff Officer, Air Force Science Advisory Board, 2016-Present
G-51 Capital Management Venture Capital Scholar, Division, 2014
United States Air Force Executive Officer, Aerospace Management Systems Division, 2013-2014
United States Air Force Lead Engineer, Air Force Weather Weapon System, 2012-2013.

**Capt George R. Sondecker**
**Executive Staff Officer**

**EDUCATION**
Harvard University
M.B.A., Business Administration
Massachusetts Institute of Technology
M.S., Aeronautics and Astronautics
United States Air Force Academy
B.S., Mechanical Engineering

**AREAS OF EXPERTISE**
Small satellites, space environmental monitoring, spacecraft operations, launch operations, program management, systems engineering.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Sep 14-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Los Angeles AFB, CA) Program Manager, Space Environmental NanoSat Experiment, Advanced Systems and Development Directorate, Space and Missile Systems Center.

**Capt Carolyn M. Tewksbury-Christle**
**Executive Staff Officer**

**EDUCATION**
University of Texas at Austin
Ph.D., Geology (in progress)
University of Tennessee, Knoxville
M.S., Geology, 2013
Smith College
B.A., Geology & Physics, 2007

**WORK EXPERIENCE**
U.S. Air Force Assistant Professor and Executive Officer, U.S. Air Force Academy, 2013-2016
Graduate Student, Air Force Institute of Technology Civilian Institution, 2011-2013
Optical Physicist, Air Force Research Lab, 2007-2011

**AREAS OF EXPERTISE**
Geophysics; ground penetrating radar; gravity and magnetic surveys for geologic applications; physics education; adaptive optics; structural geology.

**MILITARY ASSIGNMENTS**
(Pentagon, VA, Jun 16-present) Office of the Assistant Secretary of the Air Force (Acquisition); (United States Air Force Academy, CO, May 13-Jun 16) XO & Assistant Professor of Physics; (University of Tennessee - Knoxville, TN, Aug 11-May 13) AFIT/CI Student; (Kirtland Air Force Base, NM, Aug 07-Aug 11) Research Physicist & Lab Manager, Directed Energy Directorate.

# Section 3: FY2018-FY2021 Membership Departure List

**FY2018**
Dr. Michael Bear
Dr. David Bishop
Dr. Steven Butler
Ms. Natalie Crawford
Dr. Werner Dahm
Dr. Christina Davis
Dr. Jeffrey Emdee
Dr. John Fratmatico
Dr. Skip Garibaldi
Dr. David McQueeney
Dr. Stephen Merriman
Mr. Moise Solomon

**FY2019**
Gen Bruce Carlson, USAF (Ret)
Dr. Melissa Choi
Dr. Mica Endsley-Jones
Dr. Charbel Farhat
Mr. Patrick Lardieri
Mr. Darcy McGinn
Dr. William Melvin
Dr. James Peery
Mr. Daryl Pelc
Mr. Stephen Rejto
Dr. Charles Rhoads
Dr. Allan Sonsteby
Dr. Patrick Stadter
Dr. Marvin Young

**FY2020**
Dr. Andrew Alleyne
Dr. Alison Brown
Dr. Mark Campbell
Dr. James Chow
Lt Gen Terry Gabreski, USAF (Ret)
Dr. Samuel Graham Jr.
Dr. Tadayoshi Kohno
Gen Lester Lyles, USAF (Ret)
Dr. Kenneth Olson
Dr. Alan Pue
Dr. Nils Sandell Jr.
Dr. Lara Schmidt
Dr. Yadunath Zambre

**FY2021**
Mr. Aaron Blow
Dr. Robert Bontz
Dr. Eric Hall
Gen Donald Hoffman, USAF (Ret)
Dr. Juliana Hsu
Dr. Ann Karagozian
Dr. Leo Kempel
Lt Gen George Muellner, USAF (Ret)
Dr. Patric Patterson
Dr. Kevin Saeger
Dr. Gregory Shannon
Mr. Gregory Simer
Dr. Lindley Specht
Dr. Vyshnavi Suntharalingam
Dr. Steven Warner
Mr. Alan Wiechman